

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2448.—VOL. LII.

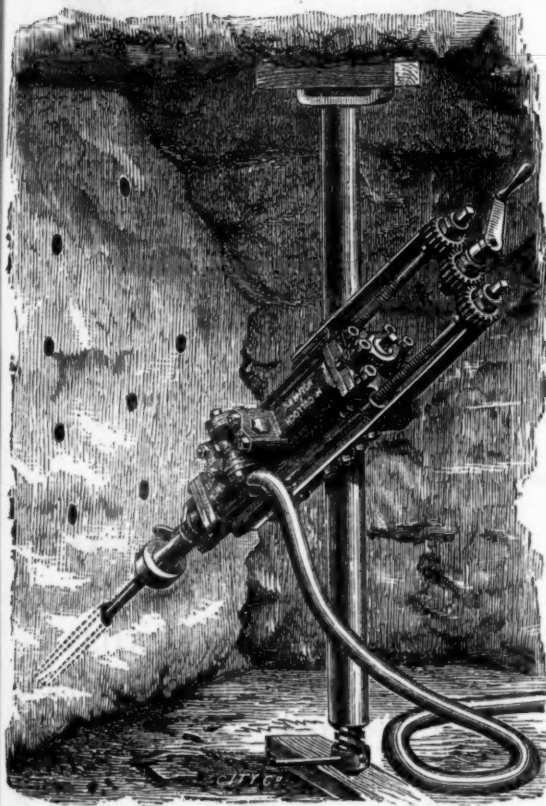
LONDON, SATURDAY, JULY 22, 1882.

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PATENT

"CORNISH" ROCK DRILL.



This Drill has been constructed after a long practical experience in the requirements necessary for Mines, and has more than realised the expectations of its inventors. The chief objects in view were GREATER DURABILITY AND LESS LIABILITY TO DISARRANGEMENT; but it has also proved itself more EFFECTIVE AND ECONOMICAL.

We are now prepared to enter into any reasonable arrangement so as to enable users to judge of its merits, as we are thoroughly convinced that we can offer the BEST ROCK DRILL IN THE MARKET.

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SILVER MEDALS AWARDED AT CORNWALL POLYTECHNIC 1872 AND 1876.

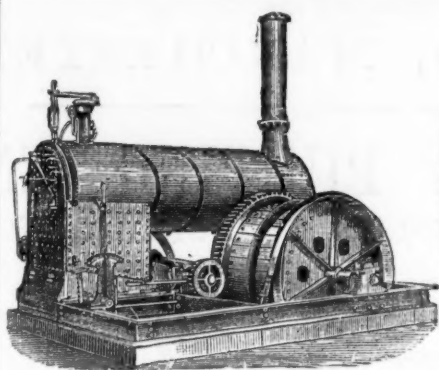
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HORIZONTAL STATIONARY ENGINES.
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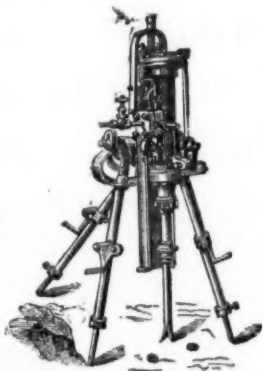
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SEVEN YEARS IN SUCCESSION

FOUR IN ONE YEAR.

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SIMPLICITY in CONSTRUCTION.
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GREAT STEADINESS.
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	Inches.	min.	sec.
Normandy Rock Drill and Air Compressor, bored	1 1/4 x 10 1/2	in	2 10
Eclipse Rock Drill and Reliance Air Compressor	1 1/2 x 10 1/2	in	2 25
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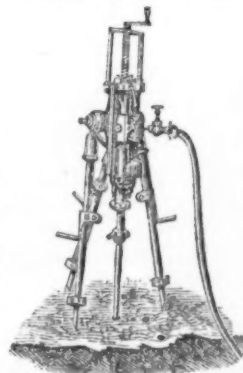
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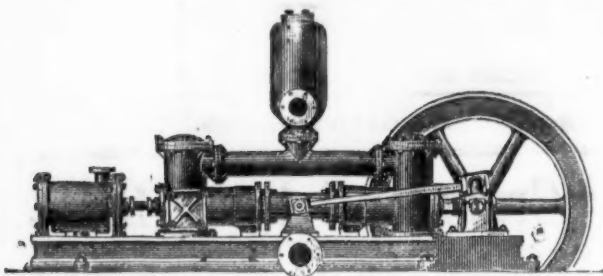
(LATE OMMANNEY AND TATHAM),

SALFORD, MANCHESTER.

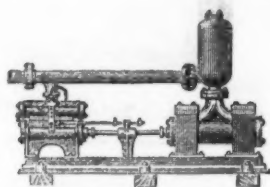


FLY WHEEL PUMPING ENGINES

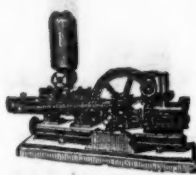
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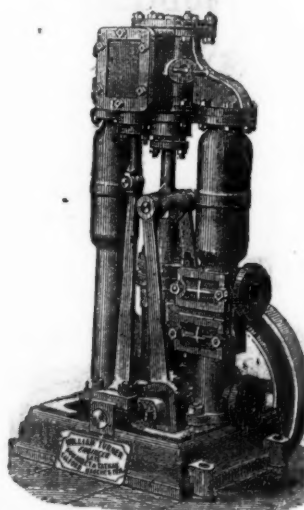
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Engine for Collieries.
Worked by Natural Head of
Water, and saving much manual
labour.



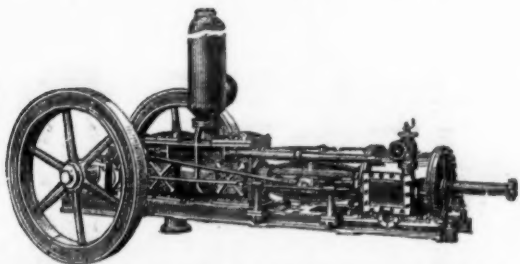
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For Feeding Boilers,
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Pumping Purposes.



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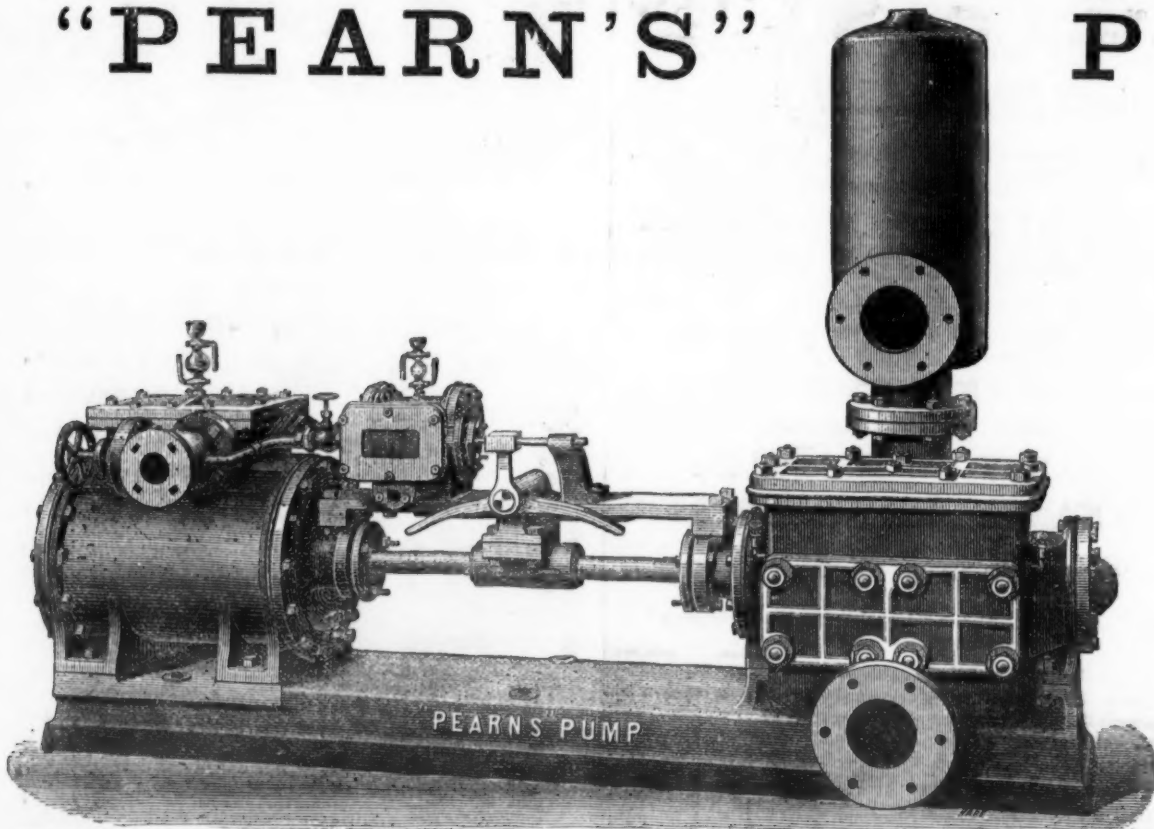
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IT HAS NO INTRICATE PARTS,
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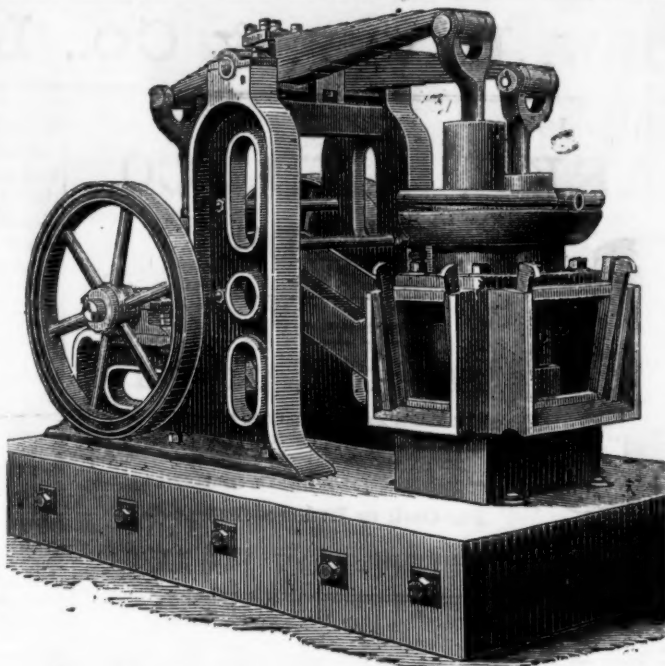
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Shipping Orders Executed with the Greatest Dispatch

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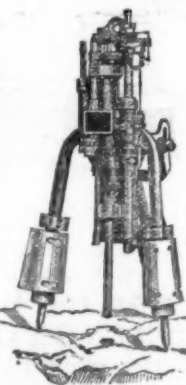
For the last three years it has been solely
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During this time it has been improved
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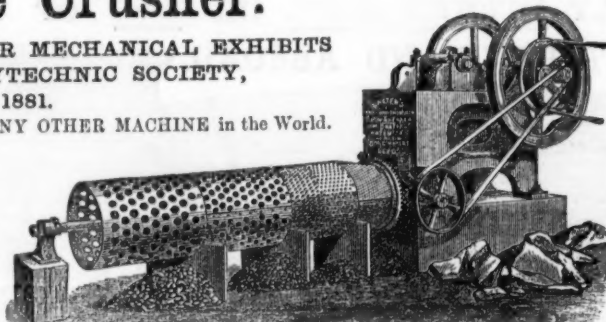
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AWARDED THE ONLY SILVER MEDAL FOR MECHANICAL EXHIBITS
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GUARANTEED to do MORE WORK with less power THAN ANY OTHER MACHINE in the World.
READ THIS—

The Bold Venture Lime and Stone Co., Peak Forest,
Messrs. W. H. Baxter and Co., June 8, 1881.
GENTLEMEN,—We have the pleasure to inform you that the
20 by 9 Stone Breaker supplied by you is now working to our
entire satisfaction, and we are now able to fulfil our contract
with ease, which we had much difficulty in doing before with the
Blake Machine. It takes less power and turns out considerably
more stone. Yours truly,
BOLD VENTURE LIME AND STONE COMPANY.



GUARANTEED NO INFRINGEMENT OF ANY OTHER PATENT.

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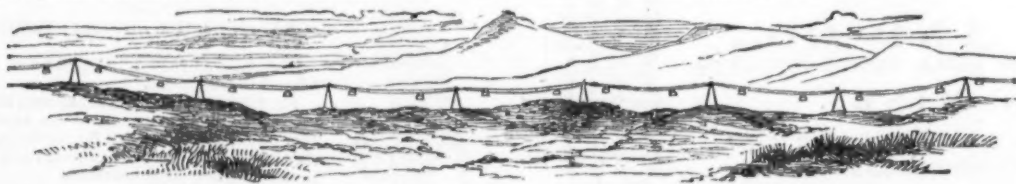
W. H. BAXTER & CO. beg to announce that they will Exhibit one of their 16 by 9 PATENT KNAPPING
MOTION STONE BREAKERS, with Patent Draw-back Motion on Wheels, and with Improved Revolving Screen and
all the latest improvements, and Challenge any other maker of Stone Breakers to come forward with a Machine the
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PATENT WIRE TRAMWAYS

Of all descriptions on the Single and Double-Rope Systems; Self-Acting, and Driven by Steam
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Carrying from 50 to 1,000 tons per day Over 150 miles erected in all parts of the world. For Particulars and Estimates app

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MANUFACTURERS OF

STEEL MINE RAILS OF ALL CURRENT SECTIONS.

SOCIETY OF TELEGRAPH ENGINEERS AND ELECTRICIANS.

Electrical science is so largely applied in connection with modern warfare that more than usual interest is attached to the reception at the School of Military Engineering of the Society of Telegraph Engineers and Electricians, by Lieut.-Colonel Webber, R.E., the President of the Society, with the permission of Major-Gen. Sir E. Wood, Commanding the Chatham District, and of the Commandant of the school, since it furnished to the non-technical members of the society an opportunity of acquiring more practical knowledge in a few hours than could have been obtained from listening to any number of scientific papers. Nearly 500 of the members, associates, and friends of the society accepted the President's invitation, and were entertained by him at luncheon at the Royal Engineers officers' mess. The guests were shown over the schools, following a programme arranged by the Acting-Commandant, Colonel Harvey, R.E., and conducted by the officers of the Royal Engineers, who were indefatigable in providing for the entertainment of all, though they were perhaps, to some extent, compensated by the amusement afforded to them by the extraordinary questions asked, one of the squad under the conduct of Major Bond, R.E., enquiring, for example, whether a light one-span bridge over a deep gorge was a pontoon-bridge, and another whether the gabions were usually prepared in England or made in the country where the fighting was going on. The luncheon having been disposed of, a highly interesting lecture on torpedo warfare was delivered in the theatre by Major Armstrong, R.E., who explained the admirable arrangements in the service for facilitating the proper use of the various electrical appliances by comparatively untrained men without danger of accident. Machines or apparatus producing high-tension and low-tension currents respectively each a distinctive colour, and this coloured is retained for the whole series, so that the misuse, unless wilfully, of conductors, &c., intended for low-tension with a high-tension-generator is impossible. Detonators, again, are all coloured red, and there are equally visible distinctions to indicate whether the explosive handled is gunpowder or gun-cotton. The relative merits of contact, observation, and other torpedoes were explained, and the descriptions rendered particularly lucid by the well-arranged experiments by which they illustrated.

The lecture being finished, the guests were next conducted through the Royal Engineers' Institution and the schools of electricity, photography, chemistry, architecture, and surveying, whilst outside the Engineers' field park, the mechanical workshops, the construction of military bridges, use of brushwood for military purposes, siege batteries, earthworks, demolition of railways and stockades, also submarine mine explosions, afforded a most interesting programme, especially so, at a moment when all these appliances may at any time be brought into practical use. That as a training place for young officers and sappers of the Royal Engineers wherein their duties in the great variety of work in which they are to be engaged in after life, the arrangement of the whole establishment is of a thoroughly practical character there can be no doubt, whilst it is equally certain that it must be of great value to the army at large, as officers of all branches resort to the School of Military Engineering to go through the various courses of study which it affords. Here they are hospitably received by the officers of the corps, and participate in all the comforts and conveniences of a good mess, and all the advantages of a library and museum. It should be mentioned that the Royal Engineers' Institute is an establishment for military and scientific meetings and instruction, which is managed by Major Vetch, R.E., the secretary, in which printing and lithography for public purposes is carried on, lectures delivered, and whence the Royal Engineers' Journal is issued monthly to the corps. The visit was most enjoyable notwithstanding the rain, and was particularly gratifying to electricians, since it afforded them a confirmation of the fact that the value of the application of electricity to warfare is fully realised at Chatham, and that there was no want of appreciation of its importance on the part of the army.

PURIFICATION OF PRECIPITATED COPPER.

In the various processes for the extraction of copper by which it is known as the humid method, the copper is usually precipitated by immersing in the cupreous solution scrap iron, sponge iron, or cast-iron. The precipitated copper thus thrown down is in almost all cases contaminated by the presence of varying quantities of arsenical compounds. In the subsequent smelting of such precipitated copper the removal of the arsenical compounds is accomplished with difficulty, and an inferior quality of copper consequently results. The invention of Mr. FREDERIC CLAUDET, of Coleman-street, has for its object the removal of the arsenical compounds from the precipitated copper previously to smelting the same, and the consequent more ready production of ingot or cake copper free from arsenic. For this purpose he either treats the precipitated copper when in the wet state or condition as obtained from the precipitating vats, or when it exists in a partially or completely dried state or condition, with a solution of caustic or carbonated alkali, or with mixtures of the same. He prefers for this purpose to employ a solution of caustic soda, or a solution of carbonate of soda, or a mixture of the same, which solutions may be employed either at the ordinary or at an elevated temperature. It will, however, be understood that the corresponding alkaline potassium compounds or mixtures of the same may also be employed. By this means the arsenical compounds existing in the precipitated copper are converted into soluble arsenical salts, either of soda or potash, which are removed from the precipitated copper by the alkaline solution, and by subsequent washing either with hot or with cold water.

In some cases it is preferable to moisten the precipitated copper to be purified with a strong solution of a caustic alkali, or of an alkaline carbonate, or of a mixture of the two, as hereinbefore mentioned, and after drying the mass to subject it to a suitable heat in a muffle or other furnace. The arsenical compounds thus formed are consequently removed in the form of soluble arsenical salts, either of soda or of potash, by lixiviating the heated mixture with water, by preference with water at an elevated temperature. The proportions in which the caustic or carbonated alkalis are to be employed will be dependent upon the amount of the arsenical compounds existing in the precipitated copper, but he has found that in treating ordinary English precipitate made from Spanish or Portuguese pyrites, 3 to 5 per cent. of alkali or its equivalent gives good results. Other proportions may, however, be adopted, his object being to convert the arsenical compounds existing in the precipitated copper into easily soluble salts, in order that they may be removed, and that the copper may be obtained in a purer condition.

HOLLOWAY'S PILLS.—In order that the slightest indisposition may not rapidly run its disastrous course from bad to worse, the afflicted of every age and class should give it immediate attention. A few doses of these thoroughly purifying and strengthening pills will always be beneficial when the least disorder reigns, or when nervous fears oppress. Two or three pills at bed time have the happiest effect in promoting perfect digestion, whereby the muscles are rendered more vigorous, the spirits more buoyant, and the entire frame more hardy. Holloway's medicine increases the quantity of nutriment derivable from a given quantity of food, and also the quality of the blood is improved, the tone of every fibre throughout the body is heightened, and the disposition to fall into disease is reduced to a minimum.

Original Correspondence.

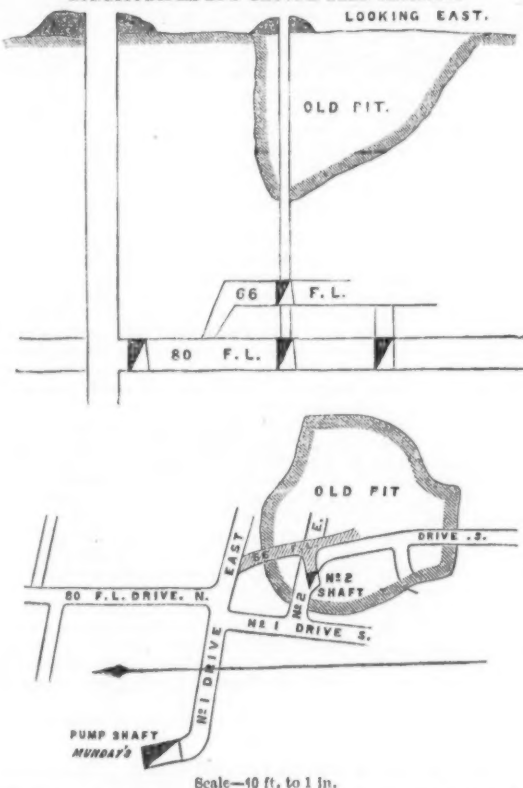
GOLD MINING IN THE MYSORE-COLAR DISTRICT.

SIR,—I fear the crumbs of comfort to be derived by the shareholders from reading the reports of the several ordinary general meetings of the companies in this district are but few, and the golden visions, conjured up no doubt by many, less than two years ago, while reading the prospectuses of these El Dorados and refound Ophir of the ancient, have been abruptly if not rudely dispelled. Apart from the actual mining prospects, the financial position appears particularly precarious, and it is impossible to read the reports without feeling, that without knowing who is to blame, the financial management has been (to state it mildly) extraordinary and unparalleled in the history of mining. The Mysore reefs especially shows a state of things which I trust for mining interests generally is unusual, and can only express a very decided opinion that the shareholders have good cause for complaint. It is no secret that from a very early stage differences of a more or less grave character have existed between the members of the staff in several of these mines and their employers; the process of washing dirty linen in public is at all times to be deprecated, still we cannot help feeling that in the controversy that has taken place in the public press, the position taken up by the officials dismissed or resigned, has been left unassailed, much that might have been explained has been withheld, and from the fact that the directors have not been able to impeach their discharged employees' veracity or controvert their statements, the gentlemen (who have expressed a decided opinion on the worthlessness of the whole district) remain virtually masters of the situation.

Had one or two managers failed to give satisfaction, and have been sent home, we should have felt no surprise, but when we see a list like the following:—Messrs. Bray, Jarvis, Rodgers, Marsh, Moon, and Bryant, all of whom have either been dismissed or have resigned within a few months of being appointed, we feel puzzled to account for it, and naturally look for some explanation, particularly as these men, one and all, are gentlemen of character and antecedents, and I repeat this exodus is in itself a matter for serious reflection. The Ooregum Mine has been so prominently before the public on account of its being the pioneer mine in the district that I feel I owe your readers no apology for referring to its position and prospects in detail, and though I feel that the personal differences that have existed there do not concern the public, I fear I shall be unable to comment on this mine without some slight reference thereto.

In order that the readers of the *Mining Journal* may more clearly understand what has been done, and what is doing, I append a sketch of the workings at Munday's shaft, representing the state of the mine when Mr. St. Stephens arrived on the ground in August last. No doubt, to many who are unacquainted with the property, the plan will be a surprise, as Munday's has been spoken of, both at the meetings and by Mr. St. Stephens in his reports as a mere shaft, and here I consider lies the weak part of that gentleman's recommendation; it is clear that very considerable explorations have taken place there, and so far, the statements in the prospectus appear to be

LONGITUDINAL AND GROUND PLAN SECTIONS.



wanting in verification. The company acting under the advice of Mr. St. Stephens is pledged to the sinking of this shaft, but it is impossible to lose sight of the fact that Capt. Bryant, whose career as a thoroughly practical miner, is well known most emphatically condemned this course, and this he did after a most careful survey, and an intimate acquaintance with the whole of the levels and drives. In a letter from the late superintendent, which appeared in the *Mining Journal* of March 11, the reasons for the proposed abandonment of this part of the mine were given; and when I compare the reasons given there, with the theoretical observations of Mr. St. Stephens, I feel bound to record a verdict in favour of the practical miner. I only hope the reef may be met with; but, in the face of the extensive drives already completed, I confess I do not quite share the Chairman's sanguine expectations, nor can I quite follow him in his congratulations on the achievements at the mine. The whole of the machinery was on the ground before Mr. St. Stephens's arrival; the stores, houses, &c., were erected, Munday's shaft and drives cleared and secured, pumps and engines at work, and all the real difficulties of the situation overcome, so far his predictions have not been fulfilled, and while I do not doubt his ability, and have no word to say against his knowledge as a miner, I think it natural that mining men should lean to Capt. Bryant; there is no law unfortunately to prevent any one calling himself a mining engineer, and as so many failures are before us in the shape of parchment engineers, I think the public cannot do better than pin their faith to the practical man.

I cannot close this letter without reference to the differences referred to in the case of this mine, they are easily accounted for: the late superintendent naturally resented being treated as a mere clerk or caretaker under Messrs. Arbuthnot and Co., and there is no doubt he worked hard to prevent a reckless and extravagant expenditure; he appears to have pointed out to the board the uselessness and drawback to the mine of Messrs. Arbuthnot and Co.'s agency; he did not succeed because of the composition of the board, his action was practically complaining of the firm of Arbuthnot and Co., in India, to the firm itself in London—the company dismissed him, and retained the services of the firm, the cost of which the shareholders are now informed amounts to 13 per cent. of the whole of the money passing through their hands. That Capt. Bryant, after the arrival on the ground of an officer to control him, should wish to leave, and did eventually resign, is by no means singular; it is, indeed, a novel

thing to appoint a firm of agents at a cost of 13 per cent. to superintend the superintendent, and to appoint also a resident consulting engineer on a large salary to supervise the mine captain. At the extraordinary general meeting held lately, the Chairman stated that Messrs. Arbuthnot and Co. were not the men to desert a sinking ship, but are they not already doing so, as they now hold less than one-half the number of shares they formerly held; there was no one at the meeting to explain the non-existence of the 2000 tons of gold bearing quartz, stated by Sir William Arbuthnot in May, 1881, to be ready for stamping. All this does not tend to show their confidence, and must be estimated at its true worth. Taking all matters into consideration I regret to say the whole business presents anything but a promising future, I fear that with all, or nearly all the capital expended success is almost impossible; I trust for the true interest of gold mining. These reckless experiments may not be repeated, such failures paralyse trade and prevent money being expended in legitimate mining enterprise in which there is more than even a wide scope.—Preston, July 17. F. K.

GOLD AND DIAMOND MINING IN SOUTH AFRICA.

SIR,—I have once more succeeded in raising the ire of a certain clique in Kimberley; simply because I remarked that the trapping system was repugnant to the feelings of every honest man. The Independent and Advertiser has devoted several leaders to the subject. They make several uncrupulous assertions, but disprove nothing I wrote; in fact they are like men struggling to write against their own honest convictions for the purpose of diverting suspicion from the real diamond thieves into a wrong channel. They write that diamonds to the extent of 2,000,000Z sterling are stolen annually, but I defy any person to prove that the Kafirs steal 2½ per cent. of that amount. In fact, everything goes to prove that if diamonds to the extent of the above amount are stolen, they must be stolen by parties far above the working Kafirs or white overseer; and the profits arising from the damnable traffic are so enormous that they can well afford to employ individuals to barricade them with their pen. The black man here is made the scape-goat of every conceivable crime, and if the big illicit diamond-buying scoundrels could hang by proxy, murders would be much more frequent. I abhor every person who is direct or indirectly connected with illicit diamond buying, no matter whether they take their liquors at the club or the lowest grog shop. The writer in the Advertiser is very wroth because I wrote favourably of the British, Barnato, Standard, Central, and French Companies (of the Kimberley Mine). But I repeat without fear of contradiction that these five companies are very good indeed, and that it was owing to their great success that so many rascally concerns were so easily floated. I have always pointed out that there is other ground in the Kimberley Mine equally as good as the ground in the above companies, but that "it was to be avoided for the present in consequence of being buried under fallen reef."

It is very easy for journalists, who are paid to do so, to assert that such is not the case; and it is sometimes difficult to produce corroborative evidence, but the following letter very opportunely appeared in yesterday's Daily Independent bearing directly on the subject:—

Kimberley, June 19.—To the Editor of the Daily Independent.—Sir,—Will you oblige me by correcting a slight misstatement that appeared in your report of the proceedings of the Kimberley Mining Board, due I know not to whom. It is there stated that we have two pieces of ground, and that we are three years in arrear with our rates. Our ground is one piece, in claims 12 and 13, which has been under reef for five years and six months. On this we regularly paid the rates until August of last year, and are prepared on once more getting our ground, to resume the payment of rates, with arrears.—W. H. CARTER.

This is only one case out of several which I could name, and although Mr. Carter and party have been five and a half years without being able to work their ground, the prospect of their doing so is still very remote. After the reef difficulty has been overcome the claims which are now buried with reef will be as valuable as the claims of the Central, Standard, or any other company. But the claims in the extreme west end of the Kimberley Mine never has been any good, and never will be. I know for a fact that these worthless claims are about to be offered to a company at home. And if the poor silly fellow who has been induced to try and float the worthless west end claims at home should succeed, he will injure his supporters, and do an irreparable injury to South Africa. As I have so often pointed out, there are a large number of concerns here well worth the attention of capitalists, and are capable of paying splendid dividends if properly handled, but there are also a large number of concerns of no value; the difficulty, therefore, is for capitalists to know which to select. Three weeks ago I informed your readers that the Barnato Company would pay another dividend in the course of a week or two; their present dividend of 4 per cent. shows the correctness of my estimate; this is the second dividend within four weeks. They will be in a position to pay a much larger dividend by the end of another month. A great deal of credit is due to the manager (Mr. Phipps) for the manner in which this company is able to pay such frequent dividends, and such sterling honesty and perseverance in a place like the diamond fields deserves special recognition. I am pleased to observe that the Kimberley Mine is in a much better position than it has been at any time during the last four years, and unless some unforeseen accident occurs the total output of diamonds must be enormous. It must not be inferred from this that all the difficulties are over-far from it, I think it highly probable that the first heavy rains will cause some heavy falls of reef. In fact the sides of the mine will never be perfectly secure until the aqueous deposit is sloped down from the surface to the igneous rock at a secure angle. The Standard, Barnato, British, and Central companies are doing splendidly, and the Rose Innis is again able to work on diamond soil two-thirds of their time, they could pay a fair dividend, but hitherto they have been greatly troubled with fallen reef.

The news from Jagersfontein is of a very unsatisfactory character and the following from the leading journal of the Free State requires no comment:—The *El Dorado* of the Free State.—The Express says: "We received from our correspondent at Jagersfontein on Tuesday last the following telegram:—'Manager of Meteor Company resigned. Place like a graveyard. Scarcely one company working.' We regret to publish this news, but think now the end has been nearly reached, we may in the future expect better times for Jagersfontein; worse they could not be."

At Dutoitspan there are still a large number of companies idle. The Anglo-African was evidently put into a company at very much too high a figure. The Griqualand West Company's ground which is equally good was only put into a company at one-third of the Anglo-African. At Bultfontein the French and Desterre Company show unmistakable signs of dividends. At De Beers Mine, the Schwab's Gully, Baxter's Gully, De Beers Central, and the De Beers Mining Company (Limited) are doing fairly well, and are earning moderate dividends. None of the other companies at De Beers are any good as yet, and they are rabid with me for saying so. It is only fair to the mine to say that some of the De Beers companies are failures solely through mismanagement. Otto's Kopje is a genuine diamond mine, but from what has been done up to the present, it cannot be a payable concern.

From the Transvaal I have received information to the effect that the Volksraad have passed a resolution nullifying all the acts of the Government during the British occupation. At the gold fields there is nothing doing. Mr. Gill, who was working at Rotunda Creek for Mr. White, was stopped last week by a party of armed Boers. The news of a rich discovery of gold at the Spelonken turns out to be another fraud. I have just received a very heavy mail from the Transvaal, and will send particulars in my next. The only war news is the following from yesterday's Advertiser:—"It is reported in Kimberley that a number of men have lately gone from the camp to the Northern Border to take part in the unhappy war which is going on there between Mankarane and the allied forces of Gasibone and the freebooting Boers from the Transvaal. The men are stated to be well provided with horses, guns, and ammunition."

Previous to Kitto leaving for England he advertised in all the

papers here for bona fide diamond mining properties, and out of 27 applications he accepted five.

Kimberley, June 22.

PIERREFITTE MINING COMPANY.

SIR,—Facts are indisputable. It is a fact that, leaving Paris by the 8 P.M. express, you can breakfast at the station at Bordeaux at 6:30 A.M., and reach Pierrefitte Station in a few hours. It is a fact that there, in the most beautiful part of the Pyrenees, you can dine at the Hotel de la Poste as sumptuously as at the Café Riche or Maison Dorée. It is a fact that after dinner you can stroll in 20 minutes to the dressing-floors of the mine, and, if you have a fancy for "ballooning," you can, in two minutes more, be at the adit mouth, your conveyance being the wire rope supplied by Messrs. Bullivant and Co. (a pretty secure guarantee for its solidity). It is a fact you can there see one of the grandest prizes in mining that exists—a lode 10 ft. wide, giving 2 ft. of solid galena (75 per cent. of lead and 103 ozs. of silver per ton is the assay of Messrs. Johnson and Matthey) and 3 ft. of solid blende, and worth per cubic fathom, after all expenses of transit, &c., upwards of 200Z. net profit. It is a fact that you can verify these statements by enquiry at the London office.

P.S.—It is a probability that if any of your readers follow the above programme, they will make what the Americans call "a considerable pile inside a month."

GOLD FROM SILICATES.

SIR,—It afforded me much pleasure to peruse the interesting description in the *Journal* of Saturday last, of the important discovery on this head made by Mr. J. Peter Kagenbusch, and patented by that gentleman. It will add considerably to the range of science and act as a further impetus to the question of extracting gold and silver from silicates. Your remarks are quite a *acquisitum* to an article in *Truth* of June 29, wherein the Editor of that scientific publication treats of the Indian gold mines in connection with this remarkable discovery by Mr. J. Peter Kagenbusch.

A. S. M. S. S.

GAS LOCOMOTOR FOR CARRIAGES.

SIR,—The facilities now possessed for compressing gas appear to encourage the hope that gas motors might be applied not only for tram-cars and the like, but even for fire-engines and omnibuses. It must be admitted that gas motors acting by explosion, as at present constructed, do not allow of an automatic motion, and are not adapted to be used as locomotors in the same way as steam-engines. The whole of the difficulties, however, appear to have been overcome by Mr. Armand Montclar, of Paris. The gas motors which he uses may be constructed on the Otto system, and they may be constructed single-acting, with one explosion for four half revolutions or two double strokes of the piston, with one explosion for two half revolutions or one double stroke or otherwise, or they may be double-acting with one explosion for one, two, or more single strokes of the piston.

According to one arrangement the gas motor is arranged with a starting apparatus consisting of a supplementary compressed air-engine which acts when required by friction or other suitable gear, on the periphery of a fly-wheel. The gas motor may be of the ordinary construction, but by preference with two or more working cylinders with connecting rods and crank shaft as usual, the valves for the admission of gas and for the exhaust are operated by cams driven by shafts actuated by certain novel arrangements of gearing from the crank-shaft. The slide-valves for the distribution of air and gas and for ignition are operated by cranks and connecting rods. The gas stored in a receiver is conducted therefrom by a pipe to a box, from which it is distributed by two valves, acted on by cams, so as to admit the same gas alternately to the two cylinders. This box is furnished with a cock which can be operated by the driver by means of a lever in order to stop the engine or to set it in motion.

All these arrangements are similar to those employed in the Otto gas-engine, except as regards the aforesaid box, and the novel arrangements in connection with the shafts for operating the valves. On the crank-shaft is a sliding clutch box operated by a lever and handle, for the purpose of connecting or disconnecting an eccentric with or from the said crank shaft. The said eccentric communicates motion to the piston of an air-pump, which draws in and compresses air into a receiver. This air may be compressed during the journey, or preferably during stoppages, or while going down hill, and serves to actuate the before-mentioned supplementary air-engine. The latter acts upon the circumference of the fly-wheel by means of friction, or other suitable gear, in order to diminish as much as possible the resistance to be overcome. When it is required to start the locomotor the supplementary air-engine is caused to turn the fly-wheel of the gas motor three or four times until effective explosions are produced in the cylinders thereof, after which the air engine is disconnected from the fly-wheel and left at rest. The compression of the air costs little, because its generation may be utilised as a brake or resistance for effecting stoppages, or while going down hill. For the purpose of moving the locomotor out of the shed, for instance, compressed air may be generated by hand or otherwise.

Various modifications of this arrangement are proposed, but they all depend on the principle of generating and storing up a volume of compressed air by the movement of the engine itself and of utilising this compressed air for starting the locomotor. UTILE.

July 18.

LANGFORD COPPER AND SILVER MINING COMPANY

SIR,—I cannot look upon Messrs. Watson Brothers reply to my enquiries as a satisfactory one. We are informed that the extracts I gave from Nov. 12, 1881, to March 18, 1882, were all given from information in letters from Mr. Dobell. We are also told that so far as the experiments were carried out they were a success, but immediately after this we are informed that only 6 tons of halvans had been run through, and the result was a solid piece of matte weighing about 2 cwt., and it had been stolen from the storehouse. The prospectus of the company held out as an inducement to parties to take shares that by a simple and inexpensive process a large quantity of silver and copper matte might be returned at a profit while the engine was in process of erection at the shaft, and shares were subscribed for on this representation, for it was a great temptation to subscribe to a concern which it was stated had not only future prospects of of no ordinary character, but had positively the still more favourable feature of immediate profits. The last named feature it was week after week advertised in the *Journal* (as experiments were carried on), was established beyond all possibility of doubt, and we are still assured that the experiments were a success, but the proof that they were so has been stolen.

Notwithstanding all assurances to the contrary, I am disposed to think the silver experiments are a failure. If they are the success intimated, why have they not been continued on a more extended scale? Why has the visible certainty of profit been abandoned for the purpose of proving by the erection of expensive machinery whether the former workers did or did not abandon the mine on the eve of great success at the junction of Langford and other lodes? For we were told in the *Journal* of July 8 that early and great results are expected from this point. Can tried and successful experiments (and we are told there are 10,000 tons of halvans to work upon) be of secondary importance to an experiment that contains all the elements of improbability and doubt?

From Messrs. Watson Brothers remarks we are evidently to understand that all the information they have given, and all the representations which have been made about the mine have been the opinions of agents and extracts from Mr. Dobell's letters. Several agents wrote sanguinely of the mine, and Messrs. Watson Brothers went into it on the reports of those agents. To me it seems a matter of regret that Messrs. Watson Brothers introduced and recommended the mine solely upon agents' reports, and not from their own personal inspection and investigation. Considering what little faith can be placed in mine reports out of ten that are written to float a

mine, this want of caution is somewhat remarkable, and much to be deplored.—July 19.

ENQUIRER.

CHEAP MINING SHARES WORTH BUYING.

SIR,—At the present moment there are shares in mines which investors would do well to watch, as some of them will no doubt rise high in value (no doubt all will move upwards) and may pay dividends. Several of them have paid dividends, and there is a prospect of their doing so again. I give a list of some dozen companies:—

Name of Mine.	No. of Shares.	Price per Share.	Value of Mine.	Dividends or profits.
Devon Friendship...	60,000	£0 5 0	£15,000	£302,592
East Blue Hills.....	12,000	0 10 0	6,000	nil
East Chiverton.....	4,000	1 5 0	5,000	nil
Herodsfoot.....	12,000	0 2 6	1,500	79,508
Marke Valley.....	9,000	0 7 6	3,375	69,750
Mona.....	8,000	4 10 0	36,000	4,000,000
Prince of Wales.....	12,000	0 10 0	6,000	nil
South Darren.....	9,000	0 15 0	6,750	1,800
West Crebor.....	12,000	0 12 6	7,200	nil
West Phoenix.....	12,000	0 12 6	7,500	nil
Wheal Jane.....	12,288	0 15 0	9,216	16,896
Wheal Jewell.....	12,000	0 2 6	1,500	nil

I have been a subscriber to your Journal for over a quarter of a century, and have frequently carefully watched the rise and fall of various mine shares. My system is to buy when low, and sell after a good rise. True I have frequently suffered losses, still I have made some thousands in Cornish mining. I am now picking up shares in some of the above mines, being persuaded it is the proper time to buy.

London, July 19. AN INVESTOR IN LOW-PRICED SHARES.

NOTE.—I would here remark Devon Friendship worked as Wheal Friendship in the former working, and Mona is reported to have paid over 4,000,000l. in profits during 112 years.

HERODSFOOT SILVER-LEAD MINE.

SIR,—Noticing the remarks in last week's Journal I send you a copy of the sales of ore which have taken place during the present company's working. They prove the mine to be still rich, and when it is remembered there is a vast extent of unworked ground yet to be laid open in the north part of this valuable sett it does appear that the property is worthy of the attention of those who are wishful to embark in a promising investment.—

LEAD SALES BY PRESENT COMPANY SINCE 1879.									
Date.	Purchasers.	Amount.	Price.	Amount.	Total Amount.				
1879.		Tons. c. qr.	£ s. d.	£ s. d.	£ s. d.				
April 28	Panther Lead Co.	38 2 0	14 2 0	537 2 10					
May 1	Nevill, Druce & Co.	15 7 3	10 15 6	165 7 4	733 10 2				
June 19	Weston, Son & Co.	26 3 0	12 12 0	337 14 0					
August 6	Nevill, Druce & Co.	19 4 1	4 7 6	84 0 2	421 14 2				
August 6	E. C. Goodhart & Co.	13 14 1	13 5 6	181 11 4					
August 6	Nevill, Druce & Co.	15 18 0	13 5 6	204 3 6					
August 6	Ditto	12 4 3	7 8 6	94 6 2					
August 6	Vivian & Sons	6 10 3	5 3 0	35 4 3	515 5 3				
October 1	Nevill, Druce & Co.	29 16 2	14 5 6	425 3 7					
Nov. 4	Ditto	16 13 3	5 9 6	91 3 7	516 7 2				
Nov. 4	Sheldon, Bush & Co.	30 0 0	16 2 6	483 15 0					
Nov. 4	Nevill, Druce & Co.	20 12 3	6 2 6	126 4 4	609 10 4				
1880, Feb. 4	Weston, Son & Co.	70 0 0	17 10 0	1225 0 0					
April 3	Nevill, Druce & Co.	30 12 3	6 12 6	202 15 8	1,427 15 5				
June 2	Ditto	41 20 1	15 3 6	636 18 2					
June 2	E. C. Goodhart & Co.	49 4 3	14 7 6	707 12 6					
August 10	Nevill, Druce & Co.	88 16 3	5 7 6	500 19 1					
Sept. 2	Ditto	41 1 2	15 16 6	649 19 1					
Dec. 6	Ditto	68 15 0	4 1 6	280 0 2					
1881, Feb. 23	Panther Lead Co.	39 4 0	15 5 0	597 13 1	877 13 3				
April 29	Nevill, Druce & Co.	37 14 0	14 11 6	548 19 10					
May 1	Ditto	62 7 3	7 8 6	463 1 9	1,012 1 7				
May 1	Ditto (Copper)	8 14 0	6 14 0	58 14 0					
May 1	Ditto	43 10 2	14 15 6	642 14 3					
June 22	John Brown	55 17 2	6 15 0	376 17 6	1,019 11 9				
July 1	Nevill, Druce & Co.	40 1 3	14 13 6	588 4 5					
Sept. 10	John Brown	22 17 1	5 5 0	119 16 3					
Nov. 26	Nevill, Druce & Co.	50 0 0	14 18 6	597 0 0					
Nov. 26	John Brown	40 0 0	5 2 6	256 5 0	853 5 0				
Nov. 26	Nevill, Druce & Co.	30 11 0	18 0 6	550 3 10					
Nov. 26	Ditto	62 4 3	4 15 6	249 7 7	799 11 5				

The February sale, 85 tons } together £11,994 10 0
" " " " } realised
" " " " } about £2,300=14,294 10 0

The August sale will be 90 tons or more for two months. A rise of 3l. to 5l. per ton in lead, with a small increase upon 90 tons bi-monthly, would at once pay a dividend, which, of course, might put shares to 2l. or 3l. each. It must not be forgotten their machinery is worth several thousand pounds.

INVESTIGATOR.

July 20.

HERODSFOOT MINE, AND CHEAP SHARES.

SIR,—Being an old reader of your Journal I have read the advertisements of Mr. Gould Sharp advising these shares, and an article in last week's edition respecting this mine, and I fully endorse the statements as to the cheapness of the shares, but what about the liability? I find the outlay to date very small, 16s. per share—say 10,500l. Well, this is very small considering the machinery, plant, &c., upon the mine could not be replaced under some 15,000l. I have also ascertained the sales of ore under the present company have realised over 14,000l., thus showing the mine is still rich, further the lead has sold as high as 18l. per ton being rich for silver, this is double the price of ordinary lead; in the former working the ore sold as high as 35l. per ton.

I have seen their last balance-sheet in April, 1882, and find a call of 2s. 3d. per share cleared them of all liabilities, including the April costs and merchants bills paid to March. Upon enquiry I find the next meeting will take place in August. They will have two sales of lead ore to credit, and judging from previous sales these should realise about 1600l., therefore a call of 1s. 6d. should clear every liability up to end of July. I find few mines in a better position, and when I look down your Share List and compare many other mines, I fail to find one in such a prosperous state financially, taking into consideration the very low price of shares. There are 12,000 shares, and taking them at, say, 2s. 6d. each it is only 1500l. for the whole concern. I remember East Caradon shares being hawked about at 2s. 6d. in 1859, rising to 56l. in 1862, and paying large dividends. I remember East Van at 1l. each in 1875, and rising to 22l. in 1876, and later still Killifreth shares in July, 1881, being hawked about at 2s. 6d., and now they are 6l. per share and paying dividends. If Herodsfoot Mine were a new property lately started, expecting to cut a lode or lodes, and having all their machinery to erect, &c., it is possible they might not be cheap even at 2s. 6d., but you have a mine known and proved to be rich, 80,000l. having been paid in dividends upon 8700l. outlay, and I find shares rose to 52l. each, with 8l. paid; therefore, the future prospects are exceptionally good, the very fact of 90 tons of silver-lead ore being raised every two months, with the lode still rich in the 215 south, the shaft sinking to the 225 to get under this lode, and a mass of unexplored ground north serve to show Herodsfoot shares are what they are represented to be, cheap and worth buying.

July 21.

CORNISH MINING.

SIR,—“Market firm,” “market steady,” “market inactive,” is the monotonous note appended to the share list in the daily local papers. A glance at the present prices compared with those of 12 months since will convince the most sceptical of the progressive advance in market value during that time, and the probabilities of most of them having reached their apex, hence the present apathy in the Cornish Mine share market. No longer ago than 12 months Killifreth shares were offered gratis and rejected; two months after, on discoveries being made, the shares advanced to 10s. each, from which point they have steadily enhanced in market value until over 6l. was reached and the mine was placed in the Dividend List; they have since receded a little, on the falling off in the ends on the eastern part. Three years ago this very date (which has caused me to pen these few remarks) I gave a list of mines for purchase at the following prices:—Carn Brea, then in 1000 shares at 23s., now in 6000 shares, present price 12s. or 72 for the original division; Cook's Kitchen, then 17. 15s. each, now 38l. 10s.; Dolcoath, 25, now 72; East Pool, 9s., now 53; West Basset, 4s., now 10; South Frances, 7s., now 12, have been 19. The whole of these mines have for a time had their rise, the latter, I ven-

ture to say, will again shortly experience an upward movement. Wheal Comfords were at that time about 3l. each, and rose quickly to 9l. on cutting a bunch of copper in the adit level, which could not be pursued in depth owing to inadequate pumping power; the consequence was shares receded in market value to 2l. each. The resuscitation of the Tresavean Mine, which adjoins it, will drain this, and enable them to sink and open out the ore ground without the aid of further machinery. Not a bad outlook here. I have long advocated the working of new or unwrought ground as being the least expensive, less risky, and safest medium of investment; it is to this class of mines attention should be drawn, there being several started within the last three years, their present prospects indicating a rise equal to any in the county during that period. The profit from a small outlay on a purchase in these mines, which I could name, is more than commensurate with any that can be expected from the necessarily large outlay required for the purchase of high price shares. It is to the return to this class of mining property we must look for the enrichment of investors and the future of Cornwall's prosperity.

CHARLES BAWDEN.

St. Day, Scorrier, Cornwall, July 20.

REPORT FROM CORNWALL.

July 20.—It is impossible to get the full advantage, so far as the price of shares is concerned, of the recent advances in the tin market while affairs in the East still remain unsettled. Rumours that act upon the Stock Exchange reach through all the ramifications of monetary life; and, moreover, it would be of no use attempting to disguise the fact, even if we were so inclined, that the result of all but the latest batch of mine meetings have been in no way calculated to help matters forward. East Pool, however, has made a welcome change, and this, with the dividend in Mellanear, the prospects in Dolcoath and elsewhere, will no doubt make mining shares move a little, though there are a few concerns that will take a good deal to galvanise into life. No doubt, however, we shall be again discounted to a certain extent by the weather, unless a speedy improvement takes place.

When a mine can make profits under the adverse influences of the past quarter at the rate of just 48,000l. a-year, it is very evident not only that the mine has a long and prosperous career before it, but that there is still a long future also to Cornish mining. We hope that the East Pool facts and figures will be studied a little by those who are so ready to exclaim against the consequences of their own folly, and blame everybody and everything but themselves.

Labour difficulties it seems are still cropping up in our mining districts. There are not a few with regard to the employment of children, as Capt. Teague pointed out the other day, but these cannot be done away, and so must be made the best of. The drawback to which Capt. Craze called attention at the West Basset account is more serious, for if men will roam about from one mine to another instead of sticking to their work it is difficult, while there is plenty of employment, to see what can be done.

Now the Devon and Cornwall Central Railway from Lydford into Cornwall, via Gannislake and Callington, is sanctioned, as it was pretty well sure to be, its promoters should feel that they are very largely indebted for that fact to the influence which the mining community of the district—lords and adventurers—have brought to bear, and the very strong evidence they have given. We hope that by-and-by this fact will be borne in mind. As a rule, however, railway companies have very short memories, and are very different in the committee-rooms of Parliament to what they are when their ends are attained, and they are in actual operation. We know of no mineral district in England at the present moment to which the railway accommodation proposed will be of more advantage, and the advantage ought in all respects to be mutual.

Mr. Frecheville's report for the past year is exceptionally interesting and valuable, and shows, all things considered, a steady improvement in nearly all directions. The total number employed underground in the Cornish mines in 1881 was 8388; aboveground, 7263; making a total of 15,651. Compared with 1880 there is an increase over all his district, which includes Cornwall, Devonshire, Dorsetshire, and a part of Somersetshire, of 2201 persons, or over 13 per cent. And compared with 1879 an increase of 4096 persons, or over 28 per cent. He has to chronicle a falling off in the production of black tin in his district. During the period of depression the producing capacity of the mines was taxed to the utmost, and large arrears of dead work will have to be performed before the output can be materially increased. In regard to accidents, Mr. Frecheville states that although one fatal accident caused the loss of eight lives—a rare event in his district—yet the number of casualties for 1881 compares not unfavourably with those of preceding years since the Act has been in force. The accident in which the lives of eight persons were lost was that at New Cathedral Mine, which occurred on Jan. 19, 1881, and was caused by an opening having been made into some old workings, which let in water and filled the 25 ft. level. A large percentage of the accidents is due to the carelessness of the men, and their violations of the rules laid down for their safety. This is especially noticeable in the case of accidents with explosives, and Mr. Frecheville believes that if the agents of the different mines would make a practice of reading the special rules relating to explosives to the men once a month, it would be attended with beneficial results. He has only found it necessary during the year to institute proceedings in two cases. The first was that of Mr. S. Bennett, manager of East Blue Hills, St. Agnes, for three breaches of the Metalliferous Mines Act. The case was heard at Truro, but was dismissed on technical grounds. This prosecution, however, served its purpose, as Mr. Frecheville afterwards received numerous notices of the starting of new mines and restarting of old ones, which might otherwise have gone on working for a long time without his knowledge. Previous to this prosecution he had only become aware of the existence of certain recently started mines by the occurrence of accidents. The other prosecution was that of Mr. Peter Temby, manager of Herodsfoot. Mr. Temby was fined 15l. and costs. In his general remarks, Mr. Frecheville says the steady advance of the tin standards during the year, from 88s. on Jan. 1 to 106s. on Dec. 31, rendered the year 1881 a tolerably prosperous one in his district. Several old mines were re-opened and new ones started, so that there was no lack of employment for labour, and the working miner participated in the improved state of affairs, as he could now easily earn over 4l. per month. In using the boring machine a rapid means of clearing the ends of the headings of smoke and noxious fumes had been introduced at Carn Brea by Mr. Wm. Teague, jun. At Dolcoath, the deepest mine in Cornwall, over 390 fms. from surface, the telephone had been successfully introduced, the men at the bottom of the mine now being able to communicate immediately with the surface. The advantage of this is obvious, especially in the case of underground accidents, and Mr. Frecheville hopes the example set by Dolcoath, in this respect, will be followed by other deep mines in the district.

To-day is an important day in the history of Redruth, witnessing the formal commencement by Mr. Richard Tangye, of the Science and Art School building there, which has been so spiritedly undertaken and so successfully brought to a practical issue. We say in the history of Redruth; but the new effort will benefit the whole of the surrounding district, and must be a notable advantage in the training of our young miners. The site has really been given—for the terms are but nominal—by Lord Clinton, and is within a short distance of the railway station. The plans of the school indicate that it will be an imposing building, and in all particulars worthy of the purpose for which it has been designed. The dimensions will be 120 feet by 80 feet. Messrs. Hine and Odgers are the architects, and Mr. J. Hickey has contracted to do the structural work for 1100l., and this will leave a balance for furnishing. Towards the outlay the Department have promised 410l. in accordance with the usual conditions being complied with. The material used will be granite dressings, with local elvans. The art rooms will be on the ground floor. The furnace-room will be in the basement, and the chemical laboratory on the first floor, and it will be in extent 43 ft. by 22 ft., to accommodate 16 elementary and eight advanced students. All the other requisite offices will of course be supplied, and water and gas laid on in the most approved forms. The school will be open to

all comers, but the committee expect that few pupils residing more than three miles distant will make use of it. In this area, however, there is a population of 25,000 persons, of whom more than 3000 attend Board schools. The school will therefore supply the requirements of Redruth, nearly the whole of Illogan, and parts of Gwennap, Wendron, Ken, and St. Agnes. Art, it is pointed out, has been hitherto less encouraged than science in the district, probably owing to the want of a properly-lighted building where works of art could be suitably displayed. It is expected that the new art rooms will be used not only by the pupils, but also for occasional loan exhibitions.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

July 20.—This week's gatherings of the South Staffordshire trade have not been marked by great activity. But this circumstance does not create surprise, since it is rather customary than otherwise the week after the Quarterly Meetings. Prices, however, have not given way. Indeed, pigs are here and there worth more money. The Tredegar hematites for instance are to-day priced at 67s. 6d.—a rise of 2s. 6d. per ton on the week. All-mine pigs stand at 67s. 6d. to 68s. per ton. One or two native pig makers are said to be making arrangements for damping down their furnaces. Derbyshire pigs 48s. 6d. delivered at works, or 1s. less if delivery only to railway stations is required. Notwithstanding the nominal rise of 1s. per box in tin-plates, supplies are still to be had at low rates. Welsh coals delivered at Liverpool were quoted on 'Change to-day at 16s. 3d. per box, and charcoals at 19s. 3d. to 19s. 6d. Baldwin's East Worcestershire coals were nominal at 19s. The announcement this week that the waste which results in the working up of the blooms and ingots which have been made at Wednesbury by the basic process proves to be a serious drawback to the success of the process has occasioned some disappointment. Manufactured iron prices are generally unchanged on last week's basis. Sheets for the galvanisers, however are dearer in some cases by 5s. per ton, making singles 87. 5s. to 87. 10s. per ton. Large coal consumers in North Staffordshire communicate that they are buying at less money than ever before.

A somewhat unusual feature marked the applications for relief received by the committee of the South Staffordshire and East Worcestershire Mining Accident Fund at their Quarterly Meeting in Wolverhampton on Wednesday. Nearly everyone of the twelve deaths on account of which relief was sought, had occurred through falls of coal. A member suggested that the Press should be requested to insert a recommendation from the committee to the colliery-owners of the district to take extra precaution in this respect; but after some discussion a fear was expressed that the meeting would be exceeding its powers if it did so, and eventually the matter dropped. The list was unusually heavy, and none of the twelve applications being refused the grants totalled 647. 10s. This the secretary stated would necessitate the first overdraw at the bank that had occurred since the fund was formed, and he asked the public for pecuniary aid.

Two demonstrations of the North Staffordshire miners were held early this week—one at Fenton, and the other at Port Hill. At the former Messrs. Woodall and H. Broadhurst, the members for Stoke, were the principal speakers, and at the latter Mr. T. Burt, M.P., delivered the chief address. All the three members remarked upon the political and other advantages which labour had obtained during the last 12 months, as evidenced more particularly in the Mines Regulation Act and the Employers' Liability Bill; and they expressed confidence in the ultimate passing of an amended Bill to the Employers' Liability measure, which had been prepared by the Parliamentary Committee, and introduced into the House by Mr. Burt. But for obstruction, it was stated, Mr. Burt's Bill would probably already have become law, and the Act it amended have been enormously improved. Mr. Burt said that the object of the measure was to prevent employers from compelling their workmen to contract out of the legal benefits which Parliament had conferred upon them. Increased combination among the miners was urged by all the speakers.

STEEL FROM STAFFORDSHIRE FIG.—It appears that the result of the experiments undertaken to convert Staffordshire cinder pig into ingot iron or mild steel is not generally satisfactory to the syndicate engaged in the operation. The probability of the metal superseding puddled iron is now considered to be very uncertain, and in any case remote. There appears to be no doubt that Bessemer steel of fair average quality can be made from cinder-pig by the use of the Thomas and Gilchrist basic lining and a free use of manganese, but the question of cost and adaptability to the wants of the district still remains to be proved. It seems that the waste of metal is a serious drawback, there being an absolute loss in converting the pig into hammered bloom of full 30 per cent., exclusive of scrap and waste steel; and the finishing process entails a further loss of 5 to 10 per cent., besides scrap. The metal also requires a slow soaking heat in the furnace or blacksmith's fire, and more labour in the manipulation than ordinary iron—practically, increased cost in fuel and labour. The quality also, according to present experience, deteriorates in welding, and although it may be partially restored by annealing, the trouble and expense of the latter process would be considerable. Mr. Hingley, and several other ironmasters who joined the syndicate, being now of opinion that the process will not have much effect on the Staffordshire iron trade, do not care to undertake the manufacture of Bessemer steel; but it is probable that Mr. Hickman will promote the formation of a company for that purpose. It is admitted that there is a limited demand in the district for mild steel, and if it can be produced at a moderate cost, and of regular quality, the demand is pretty sure to increase.

The following important letter has been addressed to the Editor of the Birmingham Daily Post:—

INGOT-IRON FROM STAFFORDSHIRE CINDER PIG.

SIR,—I shall be glad if you will allow me some portion of your space to answer the remarks of your correspondent on this subject. The information would seem to have been obtained from some one who thinks it his interest to prevent any company being formed to carry on the process in question. First, it is said that the result was not generally satisfactory to the members of the committee. Their names are Messrs. Heathfield, Crowther, Baldwin, Barker, Lloyd, Hingley, and myself. Mr. Heathfield wrote me, on July 8, “I am only surprised that the first trials showed such successful results, and I have perfect faith in the ultimate success of the process, as far as obliterating the present way of making best iron goes. I think common iron will die hard, but there is ample room for the process, without killing common iron at present.” Mr. Crowther reports: “We sent most of the sheets to customers, but we have heard nothing for or against them. We have tried some ourselves for tinning andterne coating, and they appear certainly equal to Siemens Martin. Under the hammer or coal test we can pronounce this metal the best we have tried.” Messrs. Baldwin report that owing to their works being stopped for stocking they have been unable to make any trial. Mr. George J. Barker has agreed to be a director of the company. Mr. W. B. Harrison (Jno. Russell and Co.) reported: “Rolled well into strips, loss 8 per cent.; 2 in. tubes, butt welded, one split in two of weld at 5 tons pressure; per square inch, the second tested to 5 tons did not split. Mem.—I believe the ordinary test pressure is much less than 1 ton.” Mr. Harrison was from home when our last meeting was held, and I have not heard from him since, but I understand that he intends to join the company. Mr. Zachary Lloyd (Nettlefolds) has agreed to join the board provided the site chosen is accessible to the West Midland Railway, on which he lives. Mr. B. Hingley stated at our last meeting that he should be willing to join our company if it was to make iron, but he considered the product would be steel, and therefore not a natural development of his present business.

There remains myself, and I am bound to say that I was much more than satisfied with the result of the experiments; considering the difficulties under which they were conducted, I look upon them as marvellous. In ductility and toughness the metal excels charcoal iron, and there can be no doubt that for tin-plates, best stamping-sheets, galvanized sheets, edge-tools, best boiler tubes, &c., it is unequalled within several pounds per ton of the cost. The next question raised is that of waste. Now the facts are these. The iron was melted in an air-furnace, instead of, as it should be, in a cupola, and consequently the scrap, runners, &c., were left instead of being used up. There were used 88 tons 4 cwt. of pig; less scrap left 5 tons 13 cwt. 3 qrs.—83 tons 4 cwt. 1 qr.; ingots made 88 tons 2 cwt. 3 qrs.—waste, 14 tons 1 cwt. 2 qrs., or about 17 per cent. In ordinary working the process would go on continuously night and day, and from 25 to 30 blows would be obtained; but at the Patent Shaft we could only blow in the intervals when the company were not blowing, and we had never more than two blows in 24 hours, consequently the moulds were always cold. Then we had unskilled labour, and with men unused to casting, and cold moulds, ladles, and vessels, a large amount of scrap was made, and, owing to an accident, the ferro was left out of one blow altogether, and that was all made into scrap, but of course it would be obviously unfair to charge this upon the process.

The Patent Shaft Company are, I believe, still carrying on the process, and one of the members of the syndicate has given them an order for the bars produced at a high price. It is not proposed in this case to pay a large sum for patent rights to commence with; but, on the contrary the patentees are willing to subscribe for nearly one-seventh of the capital required, while about one-half

will be taken by the board of directors. The selling price of the pig used is about 5s. per ton less than Middlesbrough, and 15s. per ton less than Swansea pig in Cumberland, and it having been proved thoroughly suitable for the purpose there can be very little doubt of a profitable result.

The question is whether or not Staffordshire is to be, as heretofore, the last to adopt any improved method, or whether we shall make an effort to retain the trade that is left to us. The success of the process is proved beyond doubt, and attested by the fact that it is being used in the manufacture of nearly 10,000 tons of steel and iron a week. If we adopt it, Staffordshire will have a new lease of life; if we stand aside, and let others anticipate us, our trade will dwindle away. For my own part, I have taken the matter up warmly, because, in the first place, I believe it will be very profitable to those who reap the first fruits; and, secondly, because I have too large a stake in the district to stand tamely by while all my plant and outlay is reduced to the value of old materials. Beyond this I have no interest whatever in the adoption of the process.

Kensington Palace Gardens, London, July 19.

ALFRED HICKMAN.

TRADE IN SOUTH WALES.

July 20.—Prices have again assumed a firm position in the steam coal trade, and the exports have been heavy. From Cardiff there have been sent away 133,300 tons foreign and 15,570 coastwise; Newport, 27,640 tons foreign and 17,771 coastwise; Swansea, 26,315 tons foreign and 10,271 coastwise. Prices range from 8s. 6d. to 12s. 6d. per ton, according to quality, but good colliery screened may be quoted at 11s. per ton. The iron and steel trades of the district are healthier in tone than for some time past, but prices keep low. Cardiff has not sent away much during the past week, but Newport exported 1600 tons to Cape Town, 500 to San Francisco, 750 to Venice, and 100 to Bayonne. Of iron ore Cardiff received 14,653 tons from Bilbao and other places, while Newport received 12,013 tons from Bilbao and 3325 from other places. Prices range from 15s. to 15s. 3d. per ton. The Blaenavon Works find a difficulty in keeping their furnaces going, owing to the exodus of Irish labourers, who have made themselves obnoxious to the Welsh and English by their quarrelsome disposition. Most of the rough work is done by the Irish, and it will be difficult in a moment to supply their place. The tin-plate industry is at last assuming a better tone, and prices are firmer, with a rising tendency. Good coke-made are 16s. per box at Liverpool, and charcoal-made from 21s. to 22s. A good understanding in this constantly expanding trade is all that is required to make it a successful one; at the same time care must be taken to prevent interlopers from sending inferior goods to the United States marked with the brands of the best makers.

The Bute Dock Bill is now before a Committee of the House of Commons, with Sir J. Selwin Ibbetson as Chairman. The promoters have the bulk of the steam-ship owners on their side, while the freighters and trimmers oppose. The wonderful success of the coal trade at Cardiff has aroused the jealousy of Swansea, and the passage of the Rhondda and Swansea Bay Railway Bill through Parliament has stimulated the hopes of Swansea, who will have, by means of this railway, a shorter route for the famous Rhondda coal from the pits to the port; but Cardiff will still maintain its supremacy, as it is impossible to bring Swansea so close to the pits as Cardiff, which is a direct route. If the proposition to amalgamate the Taff Vale and Rhymney Railways with the Bute and Penarth Docks, under one trust, is brought about, it will doubtless improve the position of all parties interested.

About mid-day on Tuesday a serious accident occurred at Tylacoch Colliery, Treorchy, the property of Mr. Thomas Jones. It was caused by the breaking of the two round pit ropes. The first broke when the cage had only just left the bottom of the pit. The engineer (Daniel Jones) then attempted to reverse the engine, but before he could do so he was thrown from his seat, owing to one of the laggings getting loose and coming in contact with his seat, which is very near to the drum of the engine. Before he was able to get up the other rope had broken. In addition to the ropes, the lever of the throttle valve was also broken. The cages fell into the pit with a tremendous crash. Mr. Thomas Thomas, the manager, descended through the upcast pit, and instructed all the men to be prepared to be brought out through the same pit. All the men were safely brought to bank. The colliery is again in working order.

TRADE OF THE TYNE AND WEAR.

July 19.—Affairs in Egypt still continue to engross a considerable amount of attention here. There is no part of the kingdom more interested, financially speaking, in the Eastern quarrel than the merchants and shippers from the Tyne and Wear. A large portion of the mineral and manufactured produce is exported from these rivers to that part of the globe, and a very large trade is done with Alexandria. The latest accounts which appear to show that the Suez Canal is still open has given much satisfaction. If there had been a declaration of war this would likely have led to complications between the shipowners and the underwriters. Insurance offices, of course, demand higher rates for war risks. Freight rates have risen very considerably all round. The best steam coal demand continues vigorous. The output at the whole of the collieries has been very large during the past fortnight, and there is an active demand for both best steam, small, and manufacturing coal of all kinds. In Durham most of the collieries are also well employed; the demand for gas coal is improving, and there is a good demand for coking coal and for manufacturing coal for the ironworks and other local manufacturers, as well as for export, coastwise and foreign. There is an excellent demand this shipping season for fire-bricks, and all kinds of fire-clay good. Most of the yards on these rivers are well cleared of this description of goods, and there is abundant employment in hand for all those works. It is worthy of note that very few shafts have been sunk in this great coal field during the past few years, and as most of the works may be now considered to have reached the maximum output of coal that they are capable of producing the value must certainly improve if the general trade continues to improve, as it has done during the past two years.

The new shaft is approaching completion at the Seaton Burn Colliery—a well known Hartley steam coal works belonging to Mr. John Bowes, and partners. This shaft is intended for an upcast shaft, and it will greatly facilitate the ventilation of the Seaton Burn and Dinnington Collieries. At Dudley, in one of the Cramlington Coal Company's Works, one of the shafts has been continued down to the low main seam a distance of 30 fms. This is for the purpose of conveying the smoke from an underground engine to the bank. This engine is to haul the coals from a large district, and it will greatly facilitate the working of these extensive mines. At the Great Silsworth Colliery, near Sunderland, the present output of coal is very large, the coals being drawn from the large downcast shaft by two very powerful winding-engines, but the output is to be largely increased by winding coal also from the second shaft, which is the upcast. The necessary operations for effecting this are now in progress. When those operations are completed it appears to be probable that the total output will be raised to a point almost unprecedented in the history of the coal trade. At the Shire Moor Colliery, a few miles north of the Tyne, a new shaft was commenced some time ago, but the operations were stopped owing to the depression of the trade. Operations have, however, been resumed lately, and the shaft will now be put down as speedily as possible. This work was commenced during the great coal famine in 1873, but it was an old colliery reopened. Coal was worked in Shire Moor in very early times. A considerable quantity was, however, left by the old men, both steam and other description.

The Northumberland Miners' Union annual meeting was held on Saturday; this was the nineteenth meeting of the members of this society. Mr. Burt, M.P., Mr. Crawford, of Durham, and others addressed the meeting. Mr. Burt alluded to the long-standing dispute in the county respecting the payment of house rent to the miners; the rule is generally to provide the men with a house and coal, but when the number of houses have been insufficient for the number of men the custom has crept in for the men to provide houses for themselves and the masters refuse to allow the men money to meet this cost, although up to a recent period it was the custom to do so, no doubt that sooner or later this question would have to be dealt with. Mr. Sedley Taylor brought before the meeting a system of remunerating labour, which, he said, had proved very successful, and had been largely introduced on the Continent into industrial undertakings, especially in France. This system

consisted in giving the workmen a portion of the profit earned in addition to the usual regular scale of wages. Mr. Taylor did not state whether this system had been introduced in connection with any of the mines in France. A system of this kind was, we believe, introduced into some of the industrial establishments in Paris many years ago, but with what success we have not been able to learn. All the speakers expressed dissatisfaction with the rate of wages now paid to miners in the district, but this cannot be remedied unless a substantial rise occurs in the value of coal, and there does not at present appear to be any immediate prospect of this being accomplished.

The iron market appears to have recovered the depression observed at the quarterly meeting arising from the disturbed state of affairs in Egypt. Cleveland iron has been bought largely for the Continent. The price is very firm, at 43s. 6d., No. 3. In some cases 3d. more is got. The stocks of Messrs. Connal's stores again show a reduction of 1029 tons. The trade generally looks better than for some time. There is a stronger demand for pig iron, and more enquiry for manufactured iron. Steel making continues to be developed. The Skerme Ironworks Company intend to commence making steel plates for shipbuilding; at present they make a large quantity of iron plates. The announcement of the failure of Messrs. Muller and Co. for 200,000l. has caused a painful feeling and some surprise. The unsecured creditors stand for heavy amounts in the aggregate. Iron ship-plates are 6l. 15s., boiler-plates 7l. 15s., bars 6l. 2s. 6d. The coal and coke trades at Middlesbrough are unchanged.

Mr. W. B. Beaumont, M.P., and the parties who projected a limited liability company to take over the Weardale Lead Mines have come to terms with the Ecclesiastical Commissioners, and the arrangements for forming the company will now be carried forward, and in a short time the whole of the mines of Mr. Beaumont will be transferred to the new concern. New and more liberal terms have been made with the Ecclesiastical Commissioners, which will enable the company to conduct the works with energy and warrant them in making extensions. This intelligence has, of course, been very acceptable to the industrious inhabitants of the Weardale Valley.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

July 20.—The magnitude of the work in which the Corporation of Liverpool are engaged in bringing a supply of water from the River Vyrnwy, in Montgomeryshire, to their city may be estimated from the statistical report which has just been printed and circulated by the order of the Council. From this document it appears that to March 31 last 103,349l. 11s. 10d. has been expended in the purchase of the land comprising the watershed of the River Vyrnwy and the site of the reservoir, together with the purchase of lands for the pipeline, with easements and compensations. For the various works in connection with the excavation of the foundation for the masonry dam, with plant and machinery, also houses for workmen, offices, stables, houses, harness, carts, and carriages, with permanent roads and repairs, 43,970l. 0s. 5d. For the quarrying operations with the construction of a railway connecting the quarry with the masonry dam, and the purchase of plant, materials, and machinery for working the same, 8212l. 9s. 6d. On the line of pipes towards Liverpool, including the outlet of the great tunnel by Hiranat, 93,382l. 0s. 6d. has been spent. Contracts to the amount of 297,886l. 6s. have been entered into for the supply of pipes and the construction of tunnels. These sums with some smaller items make a total sum of 547,144l. 18s. 1d. spent and liable for up to March 31 last. Among the contracts for the tunnels will have most interest for the readers of the Journal. The Hiranat Tunnel, 3600 yards long, through slate, shale, fine gritstone, and ash is let to Mr. F. McCulloch for 28,800l., or 8l. per yard. Two tunnels near to each other known as Cynynwn and Llanfordu, through limestone and sandstone, with a united length 3129 yards, have been let to Messrs. Gabbutt and Owen for 21,900l., or 7l. per yard.

Dr. Foster explains that the returns of limestone given in his report, and referred to by me last week, relate to the underground quarries only. As with the slate quarries so with stone quarries, it is very desirable that arrangements should be made by Government by which full returns of production might be obtained. I should also explain my satisfaction that so few females were employed about mines arises more from the fact that Welsh girls are in such good demand for domestic servants and other more distinctively feminine employments, rather than from any idea that ore dressing is at all degrading or unhealthy. Among the miscellaneous minerals referred to in Dr. Foster's report, I may notice that 289 tons of manganese were derived from Nant Uchaf Mine, near Abergele, last year. This mine is worked in beds answering to some parts of the Devonian series, and which in North Wales lie between the carboniferous limestone beds above and the Wenlock or Ludlow rocks below.

The mineral occurs with hematite in portions of the beds themselves, and it is believed there is a large quantity available. A similar deposit, now worked for hematite only, occurs in the same beds near Llangollen, and it would seem as if these basement beds of the limestone deserve more attention than they have hitherto had. There are 60 tons of phosphate of lime. There are, it may safely be said, a couple of million tons of this mineral in North Wales, and if cheap means of transit were possible, and the prejudice occasioned by the careless way in which the first consignments from the Principality were sent off were only overcome, a large and profitable trade would ensue. Its time will come. Then there is the interesting cobalt mine near Rhuddlan, to which reference has been made, from which 63 tons 14 cwt. of ore was raised last year. There is also the peculiar Welsh mineral, the bluestone of Anglesey, of which 3728 tons were raised, with 3107 tons of iron pyrites from Carnarvonshire. Large quantities of barytes also are produced from the mines between Middleton and Chirbury. These references show that besides the leading minerals of copper, lead, and zinc, a large trade may be cultivated in the cheaper but more plentiful minerals. The charge against the Hon. George Trevor and John Williams for manslaughter at Ifton Colliery, was dismissed by the Oswestry magistrates last Thursday, the Chairman remarking that the colliery was very badly worked.

SMOKE ABATEMENT.—The distribution of prizes and awards in connection with the recent Smoke Abatement Exhibition at South Kensington took place at Grosvenor House, under the presidency of the Duke of Westminster, on Friday afternoon. There was a large attendance. His Grace, in opening the proceedings, said that the exhibition, although perhaps not so interesting as flower or cattle shows, had been very satisfactory. It had been visited by no fewer than 116,000 persons. The question of an open grate was an unsettled one, but he regarded the desideratum to be a grate which should be sufficiently open to show a bright fire, which should be smokeless, and which should secure economy of fuel. That result had, however, not yet been completely attained, but when it was realised the question would arise as to whether it should not be made compulsory. Mr. Ernest Hart, as Chairman of the Smoke Abatement Exhibition Committee, said that the exhibition was an interesting one, and that so numerous and various were the kinds of apparatus as to necessitate about 1000 applications of the tests. The experiments were conducted by Prof. Chandler Roberts and Prof. Franklin as to the economy of fuel, &c. The exhibition had shown that smokeless kitcheners were possible and could be fitted to any house. The consumption of gaseous fuel afforded the most promising solution of the problem how to relieve cities from the nuisance of smoke. The committee had decided, if they could find sufficient support from the public, to form an institute among whose objects would be to promote the better utilisation of coal and coal products—to determine practically and scientifically the means actually available for heating houses as at present constructed without producing smoke, by enabling the committee to examine the subject generally and report for public information. After Mr. Henry Phillips had given a report of the success of the Manchester Smoke Abatement Exhibition, Lady Grosvenor presented the awards and prizes, the special Dr. Siemens prize of 100 guineas for the best utilisation of coal being divided and awarded to the Dawson Economic Gas Company and the Falkirk

Iron Company, while the Ladies' Prize of 50 guineas for the best smoke-preventing coal-burning kitchener was divided between J. F. Constantine and the Eagle Range Company, and presented by Miss Shaw-Lefevre. Prof. Abel then moved the following resolution.—“That it is desirable that the work thus far carried on by the Smoke Abatement Committee be continued, and for that purpose a Smoke Abatement Institute be formed.” Mr. Norman Lockyer seconded the motion, and said that there were numerous points of view in which the country might derive great benefits from the removal of the smoke, and among them scientific benefits. It was part of his official work to observe the sun, but owing to the smoky atmosphere which we had almost always over London, he could only perform his inspection once a week, and often once a month only. He believed also that a sunless place was a joyless place. The motion was carried, and a vote of thanks was passed to the Duke of Westminster for residing.

THE WILD DUCK, OR SPORTSMAN'S ARMS.

“What's a caunter lode, Uncle Henney?” “Why thee'r't old enuff and ugly enuff, Old Tom, to know what a caunter lode is as well as I do.” Well, so I tho't I ded to,” says Old Tom, “till I heer'd our boy Jacky readin in the *Mining Journal* that a caunter lode ded run north and south.” “Then a could'n't be a caunter,” says Uncle Henney, “but a cross-coose running right athurt, for a caunter is slanting, or caunting a east and west lode, and that is the meaning of a caunter lode, for suppose there is a east and west lode, and another lode running north-east and south-west—slanting the east and west lode—the north-east and south-west lode is a caunter, and that's all that can be said about 'n I reckon,” says Uncle Henney, “and I say so too,” says Old Tom; “and I say,” says Jan Tenby, “that lots of the lurned men going about now a day don't know a caunter lode from a cross-coose, or a true tinker from Old Joe H—y's tinker.” “But stop a bit, soso,” says Old Tom, “I have'n done yet, for the boy Jacky was readin a lot about granite, old and young, and middle-aged.” “Now I don't think,” says Jan Jewill “that any man can tell more about granite than we in this here mitted can tell about it, for we wor all born on the growan.” “I's sure,” says Jemmy Dowa, “and in some of our first mittins we showed the difference between moorstone and other growan rocks.” “We proved more than that,” says Uncle Henney, “for we showed clear enuff that a moorstone rock that could split in posses for gates, or for rowlers, would never produce mineral, and that we need'n't go far from this mitted to find it. Then there is the coose-grained rock, and growder, and pot-growan. All of them granite-rocks, old and young, and the main thing to know is which is good for mineral and which is good for nothing; and readin about it won't make a man much wiser.” “Why,” says Old Tom, “tell about pot-growan, I worked in a end once, and when we left work if we ded'n't tember'n up so tight as a bottle, the level would be half full next morning for scores of fathoms with pot-growan exactly like whit-pot. Now this lode was in a granite rock, some of it hard as flint, and some of it rubbley coose-grained granites—the pot-growan was also granite—I wonder which was the oldest? Old Capt. P—p R—ds used to say a lode with pot-growan in it had the scat.” “I think,” says Old Tom, “for pot-growan to get so hard as moorstone would take a very long time; and if it ever wor moorstone it took a mighty long time to turn it into whit-pot; and 'twill take the cleverest man in the Camborne Institution to say which is the oldest or which is the youngest? ‘Old Becky,’ says Uncle Henney, ‘can tell us much about the age of moorstone, growder, pot-growan, &c., as anybody going about.’ ‘I can do better than that,’ says Becky, ‘I always give ee a good dinner, and feed ee up like lighten-cocks, and that's a fine passle better for ee I reckon than moorstone or pot-growan.’ ‘Well done, Becky,’ says Jan Tenby, ‘that's the best speech I've heer'd for the day.’ ‘I want to know,’ says Jan Jewill, ‘where all the clever tinner come from? Lots of them going about who never broke a hat-cap full of trade underground since they wer born, pretend to know tin in the stone, and will tell ee by looking upon a stone how much tin there is in a ton of stuff, and then, when most of the tin turn to wolfram, peach, and cockle, they puff us as big as bull's beef, and say somebody stole the tin. They, them Porkellis Moor geese, are terrible thieves, and nobody can tell how much tin they stole from first to last; they are a wonderful breed of geese, and are trained to their business when goslings by the old gander. But deep bals have nothing to fear from them; they only steal tin from shallow uncommon rich bals and stream works.’ In former times it took most of a man's life-time,” says Uncle Henney, “to be a good tinner, but now, as Jan Jewill said, a man that never broke a hatcap full of tin stuff or any other stuff will tell ee what a lode is worth a fathom by looking in a shaft. Another will tell ee to a penny what the lode is worth a fathom by travelling over the surface.” If they are such good tinner and judges of lodes,” says Jan Tenby, “how es it that there is so many bals losing money?” “Why dost'n't thee know, Jan,” says Jemmy Dowa, “the old saying, that ‘one fool make many,’ and then again the knowing ones catch lots of people by Cost-Book bals against Limited Companies; they tell the people, and they are bucka's enough to believe it, that a Cost-Book will make a bal rich, and a Limited Company make a bal poor, and all the reason they can give for it es that in Cost-Book a man will never know how much he will lose, for the rich adventurers can slip out and put beggars in their places, and leave one man to pay all the debts, and in a Limited Company if a man take 10 shares of 1l. each, whether the bal is rich or poor, nobody can make up pay more than the 10l. Now for a man of property, I reckon the Limited plan is best and safest.” “Hold the tongue, Jemmy,” says Old Tom, “east of a hedge the bal is rich, because a es a Cost-Book bal, and west of the hedge the bal is poor because a es a Limited Company bal.” “Why,” says Uncle Henney, “the public will believe a lie, but will not believe the truth. Look at the millions that have lately been lost in Indian gold mines, when the same money if put in working our home bals would have made riches for generations to come.” “It's a wonder,” says Jan Jewill, “the Camborne Institution don't put a stop to un.” “'Twould be easier to stop the tin going down Red River,” says Old Tom, “but they can't do that yet; when they do they'll have something to make speeches about.” “Some say,” says Jan Tenby, “that when the tin is stopped going down Red River the profits will be put to make Treogan downs into a park and recreation ground for young miners, for as the young miners can't work hard enuff in a eight hours core to tire them, cricket-grounds, ball-alleys, and Aunt Sallys must be provided to give plenty of exercise, and make them sleep fitly and comfortable.” “But I think,” says Jan, “that 'twould be much better for people to take care of their money again a rainy day; for leave tin drop again like it wor not long ago, and when men are starving again they won't be able to eat or drink recreation grounds or miners' parks.” “Mr. Donohoo,” says Becky, “es just come in tired and hungry, and after a bit of dinner I'll send un in to ee; the poor fellow es just come back from Ireland.” “I hope he'll bring good news,” says Uncle Henney. Mr. Donohoo soon came in and said—“I am mighty glad my friends to see ye all safe and sound once more.” “After good meat, good drink,” says Old Tom, “try a glass of that, Mr. Donohoo, 'twill make your hair curl.” “It is prime stuff entirely,” says Mr. Donohoo. “Well how ded ee get on over there in Ireland this journey?” says Old Tom, “and will the people ever stop murdering do eethink.” “I have recently travelled the length and breadth of the country, and I am certain,” says Mr. Donohoo “that the horrible murders, crimes, and outrages would never have occurred but for the blundering of an imbecille Government. Talk of conciliation! Faith, it's nothing more or less than giving encouragement to bad men. Let stern justice to all classes first be done, and there will be an end to humbug and the farce of conciliation; but it is not justice to rob one man and give the plunder to another. A set of milk and water patriots will tell ye that ‘force is no remedy,’ but I tell ye that there is no remedy in my country without force, and if force had been employed, and justice—even-handed justice done two years ago—the horrors and crimes which have disgraced Ireland for ever and shocked the civilised world would have been prevented. I know it, and every loyal and disloyal subject in Ireland knows it to be a fact. The Government stood still while the innocent blood of rich and poor was poured out like water, and then talked of conciliation, and held out the right hand of friendship to the arch adeils, abettors, and formers of all the crimes and outrages that have occurred. Rose,

water measures will not do for my country so long as the trade of agitation is allowed. The people have been deceived and deluded into the belief that the land belongs to themselves. They would be quite peaceable and honest if left alone; but no sooner are they set down in peaceful industry than up starts agitators in all directions, teaching them rank sedition and disloyalty, and the result is the country is continually in a state of chronic and incipient rebellion. A firm and just Government would not send traitors to jail and let them out again, but as soon as ever an agitator crops up with him where it would never be in his power again to do mischief. This, my friends, is the remedy for Ireland." "Well, Mr. Donohoo," says Cousin Will, "I and Jan, sure we are all very glad to see you again, and thank you for your remarks about Ireland; and as Talleyrand once remarked in reference to an occurrence in Paris. He said—"It was worse than a crime, it was a blunder," and, no doubt, our Government with regard to Ireland 'is worse than a crime, it is a blunder from the beginning to the present moment.' Becky here brought in a fine bowl of punch, which was much relished by all present, and then all separated after a very pleasant merriment.—From Cousin Jack's Unpublished MSS.

Meetings of Public Companies.

THE MYSONE REEFS GOLD MINING COMPANY.

The adjourned general meeting of shareholders was held at the City Terminus Hotel, on Tuesday.

Colonel C. S. BLAIR in the chair.

After the notice convening the meeting had been read,

The CHAIRMAN remarked that they met together under very peculiar and embarrassing circumstances, but he felt that if he had failed to meet them he would have been guilty of a gross breach of confidence towards them. When they separated that day three weeks he was in hopes that in the interval they would have been able to reconstruct the board to the satisfaction of all parties, and have taken some steps towards raising an amount of additional capital sufficient to thoroughly test and develop their property, and he regretted very much that the interval had been wasted. And he must leave it to them, after hearing all the facts of the case, to decide with whom the blame rested. Prior to leaving the room at the late annual meeting he understood Mr. Harvey to say that if he and Mr. Price were represented on this board he should be satisfied, and in every proposal made they had been offered two seats on the board. As to the fifth member of the board, his only wish was to secure the services of the best independent shareholder who would consent to act. On the last occasion he met Messrs. Harvey and Gray, and they told him distinctly that they claimed a clear majority on the board, with Mr. Harvey as chairman; and since he (the Chairman) had sent out his circular he learned that they had asked Mr. Harvey's brother, Mr. Price, and Mr. Snell as additional members of the board. In the letter he had issued he had endeavored to explain as clearly as he could what had occurred since they last met, and he had only to explain to them under what circumstances Messrs. Harvey and Gray claimed to be justified in exercising the functions of directors when they did not represent a quorum of three, in accordance with the Articles of Association. On last Thursday morning he received a letter from Mr. Snell which informed him that Messrs. Harvey and Gray had called a board meeting for that day, and requesting him to attend. Any such notice, of course, have come from the company's secretary, but as he was anxious to know what action Mr. Angus was going to take, he went at the office at 11.30 understanding that the solicitor of the company, Mr. Angus, would be there. He found, however, that they had called a short time before and had left. In the board room he found Messrs. Harvey and Gray seated at the table with their solicitor, Mr. Snell, who was engaged in counting proxies, to which Mr. Harvey had been refused access only a few days before. He informed Messrs. Harvey and Gray that he would be glad to have a short private conversation with them prior to transacting any business, and having given them distinctly to understand that he did not do so in an official capacity, he sat down at the table. Messrs. Harvey and Gray did not appear able to sanction his request on their own responsibility, for they both went out into the passage with Mr. Snell, and after their return they said they had formed a board, and Mr. Gray proposed that Mr. Harvey should take the chair, as he (the Chairman) had distinctly told them he was not there in an official capacity. He said nothing in reply, and, in fact, he did not for a moment suppose it possible that anyone could under the circumstances condescend to take such an advantage of his sitting down at the same table with them. His private conversation did not last long, and at its termination he distinctly told them that he declined to transact any business with them until their election had been confirmed by the shareholders. In answer they said they constituted themselves a committee, and, as such, intended to carry on the business of the company, and after telling them once more they had not had the requisite quorum of three, and pointing out what he considered the impropriety of Mr. Snell's presence in the board room, while he acted as Mr. Bentley's solicitor, he left. According to the Articles of Association, they could only discuss at this meeting the business unfinished at the original meeting—the passing of the report and accounts, and the election of two directors in the place of Messrs. Foakes and Angus. With respect to the two resolutions proposed by them, he would only observe that at the late annual meeting the majority were not in favour of passing the report and accounts, and he was not aware of anything that had taken place in the interval that would lead them to change their minds. Personally, he had no objection to their being subjected to any further scrutiny the shareholders might think necessary, and he would, therefore, propose that the resolution be put in the negative as follows:—"That the directors' report and accounts be not passed." With regard to the election of two new directors to fill the vacancies caused by the resignation of Messrs. Foakes and Angus, a difficulty existed. Prior to the annual meeting a list of names was given in by Messrs. Harvey, and if the two vacancies were filled upon the present occasion it could only be done by selecting two from the list proposed, which, of course, represented Mr. Harvey's party. If they desired to name any shareholders whom they might prefer to represent them, it could only, he held, be done by not filling up the vacancies on the present occasion, and by calling a special general meeting for the purpose of electing a board of directors. He could only say, in conclusion, that in meeting them he had tried to the best of his ability to carry out what he considered to be his duty towards them, and he hoped that they would at least give him credit for that, though they might not concur with him in the ideas he entertained and in the line of action which he had thought it proper to take. As to shortly as he was able he had presented them with the state of affairs as it stood to-day, and with regard to the passing of the accounts and of the report, he should be happy if any shareholder would move a resolution.

Mr. FOSDYCK proposed that the report and accounts be not passed, remarking that it appeared to him that there was one member of the board properly constituted.—Mr. STILLWELL seconded the resolution.

Mr. SNELL requested permission to say a few words as his name had been freely used, and in reply to a shareholder said that he was the holder of five shares.

Mr. Low would like to ask the gentleman at what date his name was placed on the register?—The CHAIRMAN: Will you furnish Mr. Low with that information?

Mr. SNELL thought it a piece of impertinence to ask that. He would have been registered as a shareholder the first day the meeting was called had the books been open. As to that meeting, whether it was known to the directors or not it stood adjourned to that day week, and unless the meeting had been held on Monday, July 3, Mr. Foakes and Mr. Angus would have remained directors of the company for another 12 months. There was a difficulty experienced in getting the meeting held, and at the meeting Messrs. Harvey and Gray were both elected directors. Had not the directors at the last meeting taken the extraordinary course of making the statement they did with respect to the proxies held by them it would not have been necessary to have held the meeting. But what did the directors tell them? The Chairman got up and said he held 52,000 shares, and that Messrs. Harvey and Gray only had 19,000. The directors were challenged at the meeting to take a poll, and if the poll had been taken Messrs. Harvey and Gray would have been elected directors by a large majority—a majority in the case of Mr. Harvey equal to 2298, representing 22,000 shares. The other directors had 48,000 or 49,000 shares, but these included the shares of Mr. Arbuthnot, Mr. Lindsay, and Mr. Anderson, all of whom were more or less connected with the promoters of the company. The accounts presented did not include the whole of the liabilities. There were other accounts in India. There was a claim on which an action was pending in the Court for 3500, on behalf of Mr. Symons. Certain other claims were then enumerated by Mr. Snell which amounted to 24750. Where was the money to come from? In addition to that there was an expense of 3500, in India and in London; cash in hand about 6000; for arrears of calls about 10000, recoverable. And how was this to be met? With regard to the circular sent out by Col. Blair he thought it was unfair for him to speak about a special resolution, because a special resolution would have been given to the shareholders, and would have been done away with the cause for which Messrs. Harvey and Gray were elected directors, and there could be no question about their election as Col. Blair had suggested in his circular. The opinion of Mr. Romer as to whether the meeting held on the 3rd inst. was competent to appoint directors had been taken. He said that the meeting was competent to select them, and they were, therefore, the only directors of the company with Col. Blair until the next annual meeting. As to whether the Chairman was right in declining to take a poll they were not met to discuss. The only question was whether the meeting of July 3 was valid, and whether the adjournment was invalid. Mr. Harvey and his friends had 40000, in the company and they wanted to get it back.

A SHAREHOLDER: To the detriment of other people.

Mr. SNELL wanted to know how he dared say that.

A SHAREHOLDER: Supposing the meeting of July 3 had not taken place the meeting would be perfectly futile?—Mr. SNELL: Exactly, and where would the company be? At the mercy of a body of shareholders, otherwise every body would have been entitled to take proceedings. At the meeting they had the majority of the votes, and he believed that it was through a trick that the poll was not taken, especially seeing that they had a majority of 2398 votes. If they had gone to the poll the resolution appointing Messrs. Harvey, Gray, and Price would have been carried. The meeting that day was practically an illegal one. As to Col. Blair it would be unfair for him to sit at the board during a discussion in as to the validity of the meeting. There was a Major Blair in the Great Mysore.

The CHAIRMAN said that the gentleman referred to was not related to him.

Mr. SNELL was glad to hear it. Major Blair hosted several companies

in the London market. There was no doubt that the meeting of July 3 was legal, otherwise Messrs. Foakes and Angus would not have left the city.

Mr. FOAKES observed there was no doubt a larger amount of voting power favourable to Messrs. Harvey and his friends than to the board. That arose in this way. In order to guard against vendors who had a large number of shares placed in their names a clause was inserted in the Articles of Association providing that no shareholder should have more than 50 votes. That interfered very much in the real interest of the company, because there was no question that the board represented by their proxies something like 48,000 shares. Certainly as regarded the voting he was not wrong in saying that there were 53,000 shares which did not give any. He thought that in refusing to allow a poll they were perfectly in order. It was provided by the Articles of Association that no person should have more than 50 votes. With regard to his own and Mr. Angus's resignations he told them at the meeting which had been referred to that he would not sit on the board unless the shareholders wished him to do so, and Mr. Angus entertained the same sentiment. He did not want to call it a bad name, but it was a hole-and-corner meeting held on July 3. It was on the board after the expression of opinion that passed at that meeting. He had seen the representative of the board and Messrs. Harvey's party, and that would have led no doubt to a re-arrangement of the board satisfactory to the shareholders and to the meeting. (Hear, hear.) It did not seem, however, to satisfy Mr. Harvey's party, and it appeared at the last moment on the same day (July 3) when the adjournment of the seven days' expired the meeting which they had heard of was convened. He had had counsel's opinion, and his own opinion was that it was an illegal meeting. He had some knowledge of these things, and acting, as he always tried to do, fairly, he could not have said on the board after the expression of opinion that passed at that meeting. He had said to them that his seat was in their hands. As to the accounts, it had been said they were incorrect. He begged to differ from that, as no one could properly say they were incorrect. Certain claims, however, had been made against them which they were advised were not valid. As to the stamp duty, they had been told in the report they believed that the Government of India would remit it. As to the assets it was very difficult to say how much would be recovered in respect of calls, but they knew that 10000 was good, and they had every reason to believe that another thousand pounds would be recovered. They had been advised that they had a right to insist upon Mr. Bentley paying his affidavit, and he could see no reason why he should not do so. He thought Messrs. Harvey had taken an improper course in presenting the petition. They should have imitated the example of Mr. Bentley if they had felt aggrieved—that is, tried to have their names taken off the register, but he believed that if a majority of the shareholders were against the petition it would be dismissed.

Mr. ANDREWS felt that Mr. Snell had presented them with gratuitous advice, which was about as valuable as such advice generally is. As to his statement that the present meeting was illegal, it would turn out to be a matter of fact. The present meeting was called. It was to receive and consider the annual statement and balance-sheet, the report of the directors and auditors, and to elect directors and other officers in the place of those retiring by rotation, as well as to transact the other business of the company.

Mr. SNELL said he had simply stated that the meeting was illegal upon the opinion of counsel. Was it to be supposed that the Court of Chancery would support such an election, which depended simply on the operations of a section hidden in the Articles of Association, and which was overridden by a former section?

Mr. ANDREWS, in answer to Mr. Snell, said he prepared the Articles of Association. He submitted that it was not so very clear a case that the meeting of June 28 was not properly adjourned. He thought that the Court would express a strong opinion as to the course Messrs. Harvey and Gray had pursued, by going behind the backs of their fellow-shareholders, when there was a distinct understanding that there should be an adjournment—instead of which, without any communication, they had held a meeting which they discovered, at the last moment, should be held and declared that they were appointed.

Mr. HENDERSON thought the only justification for the meeting held on the 3rd inst. was the supposed discovery that, if the meeting had not been held, the retiring directors would have their offices filled up, and therefore their legal position as directors would be continued until the general meeting a year hence. (Applause.) He contended that the 95th Article of Association meant that the posts of the retiring directors ought not to have been filled up at the meeting at all. The meeting was adjourned for the investigation of the accounts and for communicating with certain shareholders, to see who were the best men to be appointed. He refrained from imputing any motives of a hole-and-corner meeting to Messrs. Gray and Harvey or Mr. Snell, as he thought their action would be condoned by the general body of shareholders.

The resolution was then put and carried unanimously.

The CHAIRMAN observed they could make a selection that from the list given, according to the Articles, 14 days previous to their annual meeting.

Would some gentleman move a resolution on the subject?

Mr. STILLWELL would be glad to propose "That under present circumstances the vacancies on the board created by the resignation of Messrs. Foakes and Angus be not filled up."—Mr. Low felt happy in seconding that.

Mr. RANDOLPH would be glad to know what would be their position supposing the resolution was passed that was before the meeting.

The CHAIRMAN said the matter rested entirely with the shareholders as to who should represent them. Mr. Harvey had said that if he and Mr. Price, or two of his party, were represented, it would meet his wishes, and he endeavored to form a board on that basis, but failed.

Mr. HENDERSON believed they should pass an amendment couched as follows:—"That this meeting of shareholders having heard the explanation offered as to the reasons why the meeting of July 3 was convened, and without expressing any opinion as to its legal validity, is willing to condone the action that is taken and allow Messrs. Gray and Harvey to retain their seats on the board, and that it be an instruction to them, together with Colonel Blair, to elect two other directors to form a full board."

This amendment having been seconded, Mr. BONELLA said he felt great objection to the amendment, as it would be simply playing into the hands of Mr. Harvey and his party.

The CHAIRMAN wished to explain once more his position before the amendment was put. It would leave him and Mr. Harvey and Mr. Gray, the three members of the board, a power to elect two other directors, and as to who they would probably be they might imagine from the course Messrs. Gray and Harvey had already adopted by electing Mr. Harvey's brother, Mr. Snell, and Mr. Price. He would then be in an absolute minority.—The amendment was then put and lost, the original resolution being carried with two dissentients.

The CHAIRMAN observed that that brought the meeting to a close, and probably they would think what had been done was practically nothing at all. He would propose that the present meeting having closed should form itself into a private meeting to consider the question of the company's affairs, and that a private meeting then took place, at the close of which a very hearty vote of thanks was passed to Colonel Blair as Chairman of the two meetings.

KOHINOOR SILVER MINING COMPANY.

The annual meeting of shareholders was held at the company's offices, Union-court, Old Broad-street, on Wednesday.

Mr. JOHN ELLIOTT in the chair.

Mr. J. CRUIKSHANK (the secretary) read the notice convening the meeting, and the report of the directors was submitted.

The directors reported that before operations could be satisfactorily prosecuted, it was necessary to erect a boarding house to accommodate the men, and this was not completed till March 7. Up to that time only four miners were at work, and the two men employed on the 11th level, and the two on the 12th level, who assayed 100 to the ton, which yielded 11 tons, realising 511s. by the end of March. Such a result raised great expectations of immediate success, but the rich mass of ore in question did not prove to be continuous. Mr. T. Rickard, the consulting engineer of the company, visited the mine at the time and reported that from the appearance of the lode and the fact of the richest portions of the ore mined, being composed of soluble salts of silver, that, in his opinion, this had been dissolved in the portion of the lode within reach of exterior influences, and washed down to lower strata, where he considered it would be again met with; his advice, therefore, was that a steam-engine should be erected at the end of the tunnel and a shaft sunk from that level. In the meantime, he decided to lease the 110 level to tributaries on terms of their paying to the company one-fourth of the ore extracted. The steam engine was purchased and fixed, and the shaft sunk 130 ft., very rich stones of ore assaying from 300 to 1300 ozs. being met with in its progress, but not as yet in assaying quantities. It was not, however, until Dec. 13 last that formal possession was obtained.

For a time operations were continued at both mines, but as the Donaldson mine was very first opened out and continued to improve in the most satisfactory manner, it was decided to limit expenditure to the immediate development of that property and to suspend temporarily the company's works at the Kohinoor. An assay of the ore taken from the Kohinoor tunnel end east gives 60 ozs. of silver to the ton. The directors have received information that in the neighbouring Murray Mine, on the same belt as the Kohinoor, a valuable body of rich ore has been met with at a depth of about 100 ft. lower than the bottom of the Kohinoor shaft. The tunnel right of 2 miles in extent, obtained for the Kohinoor, we enable the company to cut a series of parallel lodes reported to be very promising in the mountain side behind it, and the tunnel claim belonging to the Donaldson will not only greatly facilitate and cheapen the working cost, but will give the virtual control of a great extent of lode beyond the existing boundaries. The Donaldson Mine, situated as it is at the end of a mountain spur rising rapidly to a plateau about 1200 ft. above the point where the lode commences, affords unrivalled facilities for cheap and rapid working, as it allows of development from the end, from each side and downwards, the number of the lodes being not obtained of the continuity, strength, and great value of the ore vein, it is clearly advisable to increase the present force at the earliest practicable period. Mr. Rickard's estimate of 2000 tons of ore in reserve in the Donaldson Mine was made on April 27, the work done since then has added largely to the amount of ore in sight, and has thus strengthened the directors' belief in the prediction that 6000 tons of ore of the estimated value of £1,000,000 will be opened up by the end of September, and the mine be then in a position to yield regularly 500 tons a month without interfering with the continuous development. As the ore taken out is expected to be of a high grade, and the result gives a higher average than that assumed as the basis of profit to be expected, it is not unreasonable to assume that a substantial dividend will be earned ere the close of the present year.

The weekly statements from the Donaldson Mine since April 27 record a progress in development of singular uniformity in the successful results attained in the various construction works, the main shaft, drifts, rises, and winzes, being all in remunerative ore. These works have been executed with the object of laying out the mine on a defined plan, so as to get it into a condition to yield the least expenditure of labour, and without delaying the extension of the works. Every day's work hitherto has added to the proved reserves, which are already extensive, and constitute an asset of tangible value, which may be fairly estimated as being in great part profit. A recent report from the manager states that a trial of the lode in one of the new properties proved it to have the same characteristics as those of the Donaldson vein, the ore taken out assaying 4 ozs. of gold to the ton. A working tunnel will be forthwith started in the Golden Link, one of the new mines, and as it is expected to yield a high grade of ore, it will in all probability pay its own cost, and on completion will greatly cheapen and facilitate the future working of the properties.

The new tunnel will strike the Donaldson vein about 200 ft. below the bottom of main shaft, and will thus be about 1600 ft. below the apex of the lode. A powerful steam-engine and hoisting works are in course of erection over the Donaldson main shaft, and will probably be in work in a few days, when new drifts will be started from the 200 ft. level in shaft.

The CHAIRMAN said: Gentlemen, our meeting to-day is somewhat after the time at which we hoped to have met you, and some little explanation is perhaps due to you as to how this has occurred. It happened in this way, that from circumstances which it would be too long to go into in detail, we did not get the accounts over from the other side till nearly the end of May, and then as my friend, Mr. Sands, who had been out there for three or four months, announced his intention of coming back and bringing us some most important news, we thought it most desirable that you should have the opportunity of hearing his statements directly. Unfortunately, he was taken ill about a fortnight before his intended departure, and that delayed the meeting again for another three or four weeks. However, there has been this advantage attending the delay, that we are now in a very much better position to give you full details, and we have purposely kept our proceedings as quiet as possible, as we did not want to draw public attention to the company more than we could help, because we were so satisfied that the Donaldson Mine was a great success from the first week, I may say, of our taking hold of it, that we saw the importance of beginning negotiations at once to acquire all the locations in the neighbourhood which had any likelihood of connection with our property. I may tell you that the Donaldson being the oldest location in the district, and its lode being the highest lode in the district that carries peculiar rights, as it goes by American law that if there are any spurs, or your lode goes outside your own boundaries, you have the right to follow it to any extent within the extension of your own side boundaries. That lode has now become so defined that you may take it as a positive fact, and therefore, it was very important to us to know how far those rights may possibly extend, and whether there might be any possibility of litigation at any future time with any of the adjoining properties. But it so happened fortunately for us that the owners of the locations which we thought it most desirable to obtain, have made us the offer of two of them. We have concluded the bargain, and have purchased the Golden Link, which is 1500 feet long, and the Wheatland, which is 1500 feet long. We have paid part of the purchase money for them, and have made arrangements for completing the purchase. The advantage of having these mines is very great indeed in every possible way, because the Golden Link is really a continuation of the Donaldson Mine, though in much lower ground. I have made a rough sketch from the map which will show you the nature of the extension. The Donaldson Mine starts, as you know, from a point on the hill side, and runs up a bluff and about 100 ft. along a plateau on the top of the hill, from whence the lode again dips and goes on continuously, as we believe, through a considerable extent of country. Well, now, we have tested the lode by sinking the shaft at the commencement of work there down to a depth of 200 ft., and we had gone down in ore all the way. We have started a level at a depth of 100 ft., and have driven it in 180 ft., and I think that is also in ore all the way. We began a drift also on the other side, but we thought it prudent to stop that as we were getting too near our boundary, and did not think it well to excite the attention of the adjoining location. There is a shaft going down from the hill, and there was a tunnel—what we call the No. 2 tunnel—on the top. Higher up still there was another tunnel driven in from the No. 2 tunnel the winzes and rises have been started, and the estimate we have got this morning is that the winze has now gone down 50 ft., and that it is looking splendid. It is 50 ft. mined in ore, so you have there an extra proof of the continuation of the lode in every direction, because the mine, before we had it, was opened by an open drift all along the surface. (The Chairman pointed out on a rough sketch the points he had referred to.) We contemplate starting a drift from the bottom of the shaft in both directions. The lode has been proved to be continuous in a most remarkable manner, and although experts in valuing a mine are obliged to abide by certain technical rules, a practical man, used to consider evidence of that kind, and to make an estimate of the mine, would consider the whole distance and in every direction, and there is very little possibility but that the lode is continuous in the bottom as well. From the bottom of shaft we expect we may get 1500 ft. lower as well, so that you have 2000 ft. or 3000 ft. practically proved.

Mr. WALKER: Does the lode widen as it goes down?—The CHAIRMAN: We can hardly say that; it pinches and widens. At one time it is 3½ ft. wide, and the next it is, perhaps, 5 ft.

Mr. F. A. SANDS: The lode averages about 3 or 3½ ft. It is sometimes 5 ft., and we have had 3½ ft. of solid ore. You may take about 3 ft. as the average.

The CHAIRMAN: In opening the Donaldson Mine, as I have told you, all our development works have been in ore, and the result has been that you have proved your mine at a very small expenditure. You have only had about 13 miners at work—30 men altogether, and the result of their labour has been that in April, as you know by the report, Mr. Rickard estimated that there were 2000 tons of ore laid open. Now, according to the calculations I have made, as we have nearly doubled our run of drifts, and have sunk our shaft nearly 100 ft. more, that quantity must be at least doubled by this time, and his estimate that by next September you would probably have 6000 tons of ore laid open is on the high road to fulfilment. Now, I would ask you just to consider the meaning of that. This lode has averaged in nearly all the mill runs and returns from the smelting works—the concentrating ore from 890 to 9100 per ton, and the smelting ore over 9100 per ton. The estimate which Mr. Rickard made from which he calculated the probable profit was based on a much lower quality ore than that. We can see no probability that the lode will diminish in bulk, or in quality, or in extent, and therefore, I consider you have the Donaldson Mine an exceptionally valuable property, and one which holds out very great promise for the future. (Cheers.) In fact I never in my experience met with a mine with characteristics which offer such a chance of permanence as this has already exhibited. We have said very little about it to you as yet, but it is quite time you should know and feel the nature of the property you have acquired, and these additional lodes which have been obtained for a very small amount, and which, so far as they have been tested, appear to be the same characteristics as the Donaldson. Within these few hours we have received an intimation that two other lodes in the locality which were worked by two contracting miners have been bonded to us. These two lodes—the Venus lode—would at the apex have crossed our lode. They are evidently connected mineralogically with the Donaldson lode, and it was very important that we should secure them. Having virtually secured them we have now got four lodes 1500 ft. long, and we have a fifth lode of 1000 ft. in length. Now, the effect of our having obtained this Golden Link is this. It was necessary for us to start a tunnel to cut the lode below the shaft. The hill extends 1400 ft. above. It is very steep and difficult of ascent, and it was of very great importance that we should be able to take the proceeds of the mine at a lower level. Therefore the tunnel was an indispensable thing. We decided to run a cross-cut tunnel, to avoid the difficulty, but that would take a large sum of money and probably twelve months expenditure of time, but the purchase of the Golden Link enables us to do this easily. We shall have ore all the way. We can run the tunnel much quicker, and you will then have the opportunity of working your property certainly at a saving of 10000, yearly in working costs at least. Besides, at the same time that you are opening the Golden Link lode you will be running on the Donaldson lode. That will give you 30-0 ft. of tunnel working in your own property, and an estimate that 1700 or 1800 ft. of stopping ground above you, and you will thus have virtual control of an enormous extent of lode. You will now see, therefore, that instead of being small owners of a mine we have a very large property, and I think we have acquired it at a very low price. (Cheers.) I can tell you that when Mr. Rickard was last at this office—I think in March—he told me this: "My opinion now of the Donaldson is that from this moment the success of its development is assured, and that it is worth 10,000,000." What it is worth now I will not venture to give an opinion, but I can tell you that I set a very high value on this mine, and I think you will have reason to be very glad that you have to do with it. I think we have reason to thank the shareholders for the patience they have exercised, because although we can go now and take out a large bulk of ore that has been laid open it would have been extremely bad policy to have done so, because mines of this character especially want laying out in such a way that when we begin to stop we shall not interfere with the other works. In September Mr. Rickard estimates that 6000 tons of ore will be laid open. That will give us 500000, and in the meantime you can go on developing the other portions of the mine, and having that great extent of the lode you can begin with, and if you are short of material at other portions of the property, so as not to interfere with your stopping. My friend, Mr. Sands, will be able to tell you whether he can back up his estimate of the profits which he sent over, and as to the probable returns we may expect when we begin stopping. In the paragraph quoted from his report to the directors he tells you that the Donaldson Mine alone will pay you something like 50 per cent. as soon as we can properly get to work upon it.

A SHAREHOLDER: When is that likely to be?—The CHAIRMAN: We hope that by September next we can take out ore and make a profit. Up to this time we have been spending money on development works; but as we have always been in ore the cost has been very small. We have sold some ore, and we should have sold more but the Idaho mills were not ready in time, and when they were ready and started they were stopped for some time owing to an accident to the machinery. That brings me to a very important question. At present we have to send our concentrated ore down from the Donaldson Mine some three or four miles to the Idaho mills, while the smelting ore is being sent to the Argo, or Boston and Colorado works. Now, that costs us something like 84 a ton for the smelting ore, while the concentrating ore is treated at about 83 a ton. There is a probability that we may be able to purchase the Idaho mills. It will be absolutely necessary to have our own reduction works, as Mr. Rickard always recommended, when we simply only held the Donaldson Mine, for this reason that when you send your ore to be milled—of course you know the way it is done—each party chooses an assayer; samples are taken, and you have to accept the balance of those assays as the rate at which they are to pay you for the ore taken. That requires an immense amount of care to begin with, in selecting the ore, and it also needs a perfectly good understanding with the works to which you send the ore that they will do justice to you. They also take good care to put a high rate of profit on what they do. That arrangement involves the necessity of being especially careful in the selection of ore, and no doubt in that operation a great deal of waste takes place, and we think that by owning our own works we should save some thousands of pounds a year directly, and indirectly a great deal more. Then these Idaho mills are so situated that they command a good deal of custom work, and would pay extremely well on that head alone. Arrangements are now in progress to get an offer of these Idaho mills.

Mr. WALKER: What is the supposed cost of the mills?—Mr. SANDS: It would not exceed 50000.

The CHAIRMAN: Mr. Rickard speaks in the highest terms of the way in which these mills had been put up. He says the work is quite a model, and I am sure he will think it a very fortunate thing if we can obtain possession of them.

Mr. WALKER: Are they near our mines?—The CHAIRMAN: They are about three miles distant, but they are in the best position they could possibly be in. We could put up a mill of our own on the last location we have taken, but the supply of water there is very uncertain, whereas in the town of Idaho itself there is an unfailing supply. The mill is in the most favourable position possible, and we should have endeavoured to select a similar position if we had had to put up a mill of our own. I think if we can add that to our present holding we shall have a most complete business, and one that can be worked to very

great advantage. The position of the mine is one that gives you untold advantage for cheap working. In the first place there is no timbering required.

Mr. WALKER: What is the formation?—The CHAIRMAN: Gneiss, or trap rock. It is accessible in every direction. We can tunnel six or seven times deep in the end. You have access from the side. You can work it from the bottom. All those are points which any man accustomed to work of this kind will see how it tends to influence the cost of taking the ore. Therefore, we hope to reduce our labour cost materially as soon as we can get everything in order. Then you must take into consideration the advantages of the location. It is close to a railway station, it has telegraphic communication, and you may soon have telephonic communication with the workings, which is no slight advantage in things of this kind. Then, you are in a civilised place, near to a watering-place—Idaho springs—which is one of the most beautiful places in America, and the men are likely to stay because there is something to attract them to the place. I like to see the same men at work if possible for a long time. We have made arrangements with Mr. Alfred Rickard, Mr. Thomas Rickard's younger brother, and a man of very great experience, having conducted works for his two brothers in Algeria, to take a portion of his time to act as resident mining supervisor to direct the mining captains, and set out the works for us. I attach no small importance to this appointment, and I think it will materially add to our success to know that we have on the other side a good man to carry out our wishes. (Hear, hear.) He sails on the 29th, and we hope he will very soon be there. There is another point you must take into consideration. We are now in an extremely rich mining district. There are rich mines all round us, some of them being very great successes, and this encourages us to suppose that there will be no falling off as we get into depth in our mine, because the other mines have gone down rich in depth, and it is a characteristic of these deep fissure veins that the deeper you go the better the veins become. That was the case with our neighbour, the California. They are down now some 1300 ft., and the report from that mine is that it is now yielding better ore than the average has been. Mr. Alfred Rickard devotes the rest of his time to the California Mine, which has made the greater part of its progress at a much lower rate than we have.

Mr. WALKER: Have you any lead?—The CHAIRMAN: Not much. We have copper, and about 10 to 15 ozs. of silver to the ton. That is a very good combination, and where the gold and silver diminish in quantity there you find the copper increases. It is quite peculiar to mines of this class. Mr. Sands has come straight from the Donaldson Mine, and he will be able to give you the latest possible information from it. In reference to the accounts they were taken at a period necessarily at the end of the year, when we were obliged to cut through everything to arrive at some sort of balance. It was an extremely unfavourable time to give you any idea of the actual working of the company, but I think we may point out this to you, that all the expenses of starting the company have been exceedingly small; that our preliminary expenses only amounted to 1500, and that the law costs and all the expenses on this side are, perhaps, as low as in any property of the kind that you will ever find brought on. We have spent nothing in advertising. We have trusted to the property to make its own way before the public, and now it is beginning to do so. We have had to be patient and wait until there was an enquiry made for our shares, because when the purchase of the two properties was completed it left us with very little cash to go on with; but I think when you hear that we have opened the Donaldson Mine to the extent that we have—300 ft. of drift open and 200 ft. of shafting done, proving the mine to an extent which, to my mind, conveys the impression that we have something like 50,000 tons of ore virtually proved in it, you will acknowledge that we made pretty good use of the money we had. (Cheers.) It was necessary we should have more capital, and fortunately a demand for the shares sprang up, and we have quite sufficient capital for the present.

Mr. WALKER: What is the estimated value of the 50,000 tons? (Laughter.)—The CHAIRMAN: I can hardly say that; but if we can make a profit of 10¢ a ton that will amount to a large sum of money. If the ore keeps up to 70¢ a ton, which is the lowest estimate stated, and I can see no reason why it should diminish, you have a very valuable property which will take some time to realise. I wish now to say a few words about the Kohinor. The reason why we were disappointed at the Kohinor Mine was this—As I have said, we had a very small amount of capital in hand to work these two great properties with. We did not stop the work at the Kohinor Mine from any doubt as to our speedily coming upon valuable deposits of ore, because all the indications pointed to that; but simply because the Donaldson Mine was such an extraordinary success from the beginning, and we felt it prudent to keep what cash we had to develop it as rapidly as we could, and the result has fully justified all we contemplated doing in that way. With that very small amount of money we have presented you with an enormous development which, I think, scarcely exemplified in any mine of the kind that I have ever heard of. We have now given orders to recommence working at the Kohinor, and I think we shall be very shortly able to announce to you valuable results.

Dr. MAYBURY: Is any part of the Kohinor let to tributors now?—The CHAIRMAN: Yes, the 110 level and the intermediate level.

Dr. MAYBURY: For what time?—The CHAIRMAN: For six months. All the mines behind the Kohinor, as far as they have been opened, appear to yield ore of very great value. You must bear in mind that the Kohinor is a very different mine to the Donaldson Mine. The Kohinor is a continuous one, but the rich deposits only come in at intervals.

Mr. WALKER: I suppose the ore is found in pockets?

The CHAIRMAN: Yes; irregular deposits. Soluble salts have filled up the crevices at some time or other, but have been washed out.

Dr. MAYBURY: Are the tributors working near the probable pockets?—The CHAIRMAN: They are working under our superintendence opening the mine. They give us a percentage on the ore they raise free of cost, and, of course, they are developing the mine. The Chairman added that it was the intention of the board to have the accounts made up early in January in future, and they hoped to be able to call the shareholders together next year, and to be able at that time to announce results in the way of a dividend. (Cheers.)

Mr. FRANCIS A. SANDS (managing director) said: Gentlemen, I am very pleased that I have returned in time to meet you. When I returned from America I had had no intimation of the date of the annual meeting; in fact, I had been looking out for it in the mining papers, and I was very glad to find on my arrival that the date had been fixed for to-day—just a week after my arrival. The Chairman has given such a very full statement in reference to the working of the Donaldson Mine and the position of affairs generally that I do not know that he has left very much for me to say, except that as I have just returned from the mines it will be some satisfaction to you to hear something from one who has lately left the property. We are working the Donaldson Mine, as has been stated, in an exceptionally favourable manner. The levels are run in from the side of the mountain. Each of these levels (Mr. Sands pointed out their position on the plan) as we drive them south as we designate it—really south-west—gain in value every foot in depth. The No. 2 drift from shaft will cut the lode at the depth of 1500 ft. below the apex. We have never been without ore in the shaft. It has varied in quality and quantity, and we have never been without ore. As in the case of the No. 100 drift, and the rises and winzes. The No. 2 winze is down about 50 ft. almost in a solid body of ore; so is the rise going to the No. 1. We are now at work on the Nos. 3 and 4, and when I left the No. 3 was just getting into the ore. And so at every point, you may say, at which we are at work we are in ore, which is, of course, most satisfactory in every way. It is our intention to continue the sinking of this shaft. When I left the machinery was being fixed for hoisting. We have machinery that will hoist from a shaft of 1000 ft. with as much as we shall require of it, because having acquired the Golden Link, we shall run a tunnel in which will cut our shaft at a depth of about 900 ft., and as we have power to hoist 1000 ft. that is all we need, as after that the ore will be taken out from the valley, thus saving expense in hauling, &c. The acquisition of these lodes, to which the Chairman has referred fully, is most important in every way. Of course we all know that Mr. Elliott was for many years Chairman of the Richmond Mine, and it was his policy that occasioned that company to acquire properties which subsequently proved to be of more value than the original Richmond Mine itself, and had they carried out Mr. Elliott's policy they would have been able to acquire the late lodes, and the damages they have had to pay would have brought up every claim on the mountain at the time Mr. Elliott advocated that policy. We acquired these adjoining lodes on such very reasonable terms that it would have been worse than folly not to have immediately taken the opportunity of including them with our property. (Hear, hear.) Mr. Sands proceeded to state the reasons which had enabled the company to obtain possession of these lodes on such advantageous terms, and added that as the properties were bought direct from the owners the company had spent nothing in the way of commissions. With the two lodes which were now in course of purchase they would have 7000 ft. of lodes, or over a mile, on true fissure veins. The smelting ore from the Donaldson Mine never yielded less than 3-80 ozs., while some of it had yielded 5-10 ozs. of gold alone. They also had from 10 to 15 per cent. of silver, and a good percentage of copper. Mr. Rickard estimated the reserves in April last at some 2000 tons, or about 20,000¢, and that estimate was made in a very cautious and careful manner, and could be implicitly relied upon. Mr. Rickard recommended that sinking should be deferred, and the mine had been developed in a thoroughly mine-like manner in every way. (Cheers.) The apex of the mountain was about two miles above the sea level. By September it was hoped that they would have enough ground blocked out to supply them with 500 tons of ore a month. It was intended to purchase rock-drills and a compressor, which would enable them to drive much more rapidly than they could at present; and as the tunnel would be run in all the way through the Golden Link property, it would probably pay for itself, and would not interfere with the working in other points. Mr. Sands went on to point out that by acquiring the Idaho lodes they would be able to save half the expense of treating the ores, and pointed out that independently of the company the purchase would be a very desirable investment at the price at which he believed he could secure it.

Mr. WALKER asked whether the mill had been erected many years?—Mr. SANDS replied that it had not been erected many months. The cost of the erection had been about \$20,000. About 70 to 80 tons of ore from their property had been treated at the Idaho mill; but it was only just getting under weigh. The mill was most favourably situated in every way. With regard to the appointment of Mr. Alfred Rickard, he thought that was a most fortunate circumstance. Mr. A. Rickard, besides being a first-rate miner, capable of understanding all the technical work in connection with the property, was an experienced assayer, and would quite save his salary by the assays he would be able to make for them. He (Mr. Sands) thought that the wisest policy had been adopted in reference to the Kohinor Mine. He believed that within the next 100 ft. of sinking in the mine they would come upon a settled run of ground, and that some very valuable deposits would be opened up.

Mr. WALKER: How far are the mines apart?—Mr. SANDS: About 13 miles. They are connected by railway.

Mr. AIKMAN: Are there any properties intervening between the Donaldson Mine and your new purchases?—The CHAIRMAN: No; we have the complete series.

Mr. WALKER: Have you the capital to pay for them?—Mr. SANDS: We have made arrangements for that. In reply to a further question, Mr. Sands said the question of purchasing the Idaho mill would be a matter for further discussion. He added that the Donaldson Mine was creating a great deal of local attention.

The CHAIRMAN, in reply to Mr. Aikman, stated that all the patents were complete and indefensible. (Cheers.)

On the motion of the CHAIRMAN, seconded by Mr. WALKER, the report and accounts were unanimously adopted.

Mr. CHALMERS proposed the re-election of the Chairman, who was the director

retiring by rotation.—Mr. SANDS seconded the proposition in highly complimentary terms, and having been supported by Mr. AIKMAN and Dr. MAYBURY it was carried.

The CHAIRMAN, in returning thanks, contrasted the position of the company with that of many of the Indian gold mining companies.

On the motion of the CHAIRMAN, seconded by Mr. URWICK, Mr. James Cooper was re-appointed auditor.

Cordial votes of thanks were passed to Mr. Sands and to the Chairman and the other directors, and the meeting then closed.

THE ISABELLE GOLD AND SILVER MINING COMPANY.

The ordinary annual general meeting of shareholders was held at the offices of the company, Palmerston Buildings, Old Broad-street, on Tuesday.

The Right Hon. the Earl POULETT (Chairman of the company) presiding.

Mr. W. C. CHALMERS (the secretary) read the notice convening the meeting. The report of the directors having been taken as read, the secretary read the audited balance-sheet.

The CHAIRMAN said: Gentlemen, I shall be happy to answer any questions that may be asked upon the balance-sheet. If there are none I beg to propose that the directors' report and the accounts be received and adopted.

Admiral SHAWYX: I have been asked to second this motion, gentlemen, because I know a good deal of what faith may be accorded to what the manager has to state to you with reference to the mine.

The subject of previous difficulties is naturally one which we do not want to recur to as long as we have something to tell you which is promising for the future. Now, in my experience of mines, which is considerable, I have found generally that there are three causes of delay and difficulty. The first was that you either had no mine, or a mine that was not producing; the second was that you had not a mill, and that you must build it; and the third and worst cause was that you had an incapable manager. In this case it is exactly the reverse. You have a good mine as part of the property of the company, producing a considerable quantity of ore now; and not at all limited in its power of production. As far as we know it could produce at least ten times the quantity it is now producing. You have got a manager who is doing his duty thoroughly well, and who is here to answer any questions you may put to him to-day. So well is he doing that the mill under his management is constantly producing money. So on these three points there is no fault to be found; and if the shareholders want to know what will be the result of further work the manager will tell them, not on a mere theoretical basis of calculation, but on the basis of the bullion which has been sent into the Carson Mint each week. All we want is an extension of a very small and unimportant portion of the works, so as to enable us to produce more bullion for you to pay large dividends. Whether the shareholders will come forward and do that or whether the directors will be obliged to seek money from other sources is a matter which the shareholders themselves will have to consider; but I can only say from what I have seen and heard, that there is very fair value there for the additional capital we want, and we are obtaining 30 per cent. in gold, and 10¢ in copper—the copper being obtained in a pure state in powder. If he is able to do that on a larger scale we shall do more than well. Ten tons a day treated for copper alone would pay the whole of the expenses, and the silver and gold would turn in as bullion for dividends. Now, it might be said, "But you are all dependent on a mine that may be exhausted." We all confess that no miner can see beyond the end of his pick, and that mineral deposits may come to an end; but the best guarantee is that we have ore above and below our present workings—200 ft. above and 100 ft. below—and best of all we are extending every day in width, and the rich lodes which have been made above in these things as mines which give out, but I beg to point out to you that this mine which the energy of our manager secured whilst he was unduly delayed when running the tunnel, and seeing that mishap might result if he did not do that something, which is producing these results, which, if supported by the shareholders as it should be, or if the directors are able to get the necessary support—not to a large amount—will not only give them dividends from this mine, but will enable them to continue the tunnel, and by opening up all the properties of the Isabelle enable us to defy any chance of being played out in one mine. 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Dunhill be and are hereby appointed liquidators for the purposes of carrying out such winding-up and re-construction. 3.—That the liquidators or liquidator be and are hereby authorised to carry out a sale or transfer of the company's property and business to a new company with a capital of £50,000, divided into 100,000 shares of 5s. each, upon the terms following (with such modifications, if any, thereof, not, however, being substantial variations therefrom as may appear to the liquidators or liquidator to be advisable):—(a) That such new company shall take over by purchase the property and business of the Dunhill Hill Consolidated Gold Mining Company; (b) That such new company shall take over and indemnify the present company against the payment of the debts and liabilities of the present company; and (c) That the shareholders in the present company shall receive one share, fully paid-up, in such new company in exchange for every two shares fully paid-up in the present company, and shall also have the option of subscribing and paying for one share in such new company for every share fully paid-up held by them in the present company; and (d) That such provisions as may be necessary to the liquidators or liquidator be made, pursuant to Section 161 of the Companies Act, 1862, or otherwise for the case of shareholders holding shares in the present company, not being exact multiples of four shares, or holding shares partly paid-up, or who may not wish to have shares in such new company. 4.—That the said liquidators or liquidator be and are hereby authorised to carry out such sale and transfer, either under the provisions of Section 161 of the Companies Act, 1862, or otherwise as may be deemed advisable.

A vote of thanks to the Chairman terminated the proceedings.

CHILE GOLD MINING COMPANY.

The first ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Thursday.

Mr. JOHN HARVEY in the chair.

Mr. J. SYKES WRIGHT (the secretary) read the notice convening the meeting, and the report and accounts were taken as read.

The CHAIRMAN said it was the intention of the directors to have called a general meeting immediately after the receipt of advices from the mine, but circumstances arose which induced the directors to delay calling the meeting. The large amount of money which had to be paid for machinery, supplemented by the demands from the mine, so reduced the resources of the company that the board found itself obliged to avail themselves of the power under the Articles of Association to issue debentures. That was done after consultation with some of the largest shareholders. He regretted that the invitation to the shareholders to take debentures had not been so warmly responded to as the board could have desired. A sufficient amount was, however, applied for, coupled with more favourable news from the mine, to induce the board to make an allotment. He could not understand any body of shareholders with such a valuable property and with such large sums spent in development and machinery, not coming forward more liberally. Although there was a sufficient amount of machinery to work the mine profitably, still more machinery would increase the returns; but this would entail expense, and if the shareholders were desirous of erecting more stamps it would be necessary for them to come forward and take up more debentures. In the first place of the report they would see the reason for the great expenditure to which he had referred. The machinery as not handed over in the condition the board were led to expect, and since Mr. Nicholson took possession on Nov. 18 he had had to spend large sums of money, not only in improving the machinery, but also in developing the mine. He was glad to say there was nothing in the report but what had been substantiated and confirmed by recent reports. Mr. Nicholson's predictions had all come true, and as he had been so successful in his prophecies in the past, they might look forward to his prophecies in the future being equally satisfactory. As regarded the staff, there was plenty of active labour to be got at the mine, but it was indifferent and very expensive, and the board had under consideration a plan for substituting Chinese coolies, such as had been adopted by the St. John del Rey, and found to work well. Either singly, or in conjunction with other companies, the directors hoped to get the labour considerably reduced. The most effectual way to get this done was to get the railway made from the River Orinoco to the mine. In about three months surveys in connection with the line would be sent home; and it was of the utmost importance that the shareholders in this and the neighbouring mines should assist in getting this made. In Australia, in the early history of gold mining, the difficulties which they had to contend with were equal to, if not greater than, those which they had to contend with here, owing to the better means of transit. A yield of 3 or 4 dwts. per ton was sufficient to pay expenses, and leave a small balance to the good. Guayana, where the mine was situated, was only three weeks distant from London by direct steamer, and he believed it would be possible to considerably reduce the expenses. The greatest anxiety of the directors had been with respect to water, but he was glad to say that had been entirely removed, for Mr. Nicholson wrote that not only was he certain of having enough water to work the 40 stamps during the year, but was of opinion that there were 80 stamps erected he would be able to work them during the year. He had now sufficient to keep them going for several years, by which time he hoped they would have a railway, and be able to get better fuel in the shape of coal. The last purchase of 450 acres of woodland was about 2½ miles distant from the mine, and the road was so level that instead of having to carry the wood on donkeys' backs as hitherto, it could be taken to the mine in ox carts, which would materially reduce the expense of the fuel. He might mention that, by judicious management, Mr. Nicholson had reduced the daily consumption of wood from 12 of 14 cords to about eight cords. Mr. Nicholson found on his arrival that the stamps available for crushing, and he immediately set to work to have the other 20 stamps replaced and repaired. A few days ago the directors received by telegram advices of the returns of the first crushing of 10 new additional stamps, and that return was at the rate of 1850 ozs. per month, showing a considerable increase on the former output. That amount, if continued, would be sufficient to pay a good dividend; but the directors intended to go on and increase the stamps to 40, there being now 30 at work. With regard to sending out additional stamping machinery, that was a question for the shareholders to decide. At present the directors had not sufficient money in hand to justify them in doing that. If they did 50 stamps instead of 40 it would not be difficult to calculate what the returns would be—about 8000 ozs. of gold from free gold alone. The Premier, the vessel which the directors had chartered, arrived safely at its destination with about 400 tons of machinery on board, the greater portion of which consisted of metal pipes, which would be taken to the mine as required, but there was no immediate necessity for going to that expense. The latest addition was a set of boilers, and some more of Hendy's concentrating machinery. Up to the present the directors had not been able to say anything to the shareholders about the sulphuric acid, except what they yielded on assay; but the latest advices informed them that the calcining machine or furnace was within two days of the mine, and no doubt they would shortly be at work. At the Chile Mine, the only concentrating machinery in the district would be found. The Callao Mine, which had been floated in Paris with upwards of a million of capital, had never put them up, but no doubt they would follow this company's example in that respect. When these concentrators were up, the returns would be increased. Since this company took possession, the mine had been gradually improving. The manager's letter, received only a few days ago, stated that the free gold taken from a sample of quartz was 10.12 dwts. 3 grs. per ton, exclusive of the sulphuric acid. The manager maintained that the mine was only in its infancy, and that the deeper they went the richer and more profitable it would become, and, indeed, the manager had stated that when Callao became a thing of the past, the Chile Mine would be attaining the zenith of its glory. The mine was so fully developed, that they could with ease keep 60 stamps regularly at work with little or no additional expense; and as 40000, a month might be looked upon as the average rate of expenditure, they had only to calculate the yield to see what the profits would be. As a matter of fact, the mine was no speculation, the ore was there, and all that was required to be judiciously worked and carefully mined to produce good returns. (Cheers.) In conclusion, the Chairman moved the adoption of the report and accounts.—Mr. McANDREW seconded the resolution.

The CHAIRMAN, in reply to Mr. Surtees, said they did not want any more capital for working expenses, but more capital would be necessary if they erected any further machinery.

Mr. SURTEES: You do not intend to increase the number of stamps at present?

The CHAIRMAN: We cannot afford to do it, but if the shareholders come forward we shall be happy to increase the number.

A SHAREHOLDER asked what was being done with regard to recovering some sum from the vendors in consequence of the bad condition in which the mine was handed over?—The CHAIRMAN: We are in communication with the vendors, and we hope we shall come to a solution of the difficulty without having recourse to legal proceedings. (Hear, hear.)

The SOLICITOR, in reply to a shareholder, said that a very large proportion of the vendors' shares were not transferable within 12 months of the company taking possession.

A discussion ensued, chiefly on subjects of detail, and of no public interest.

Mr. HAWKINS thought the directors, before issuing the prospectus, ought to have made themselves better acquainted with the value of the property, and should have taken the opinion of other persons besides that of Mr. Atwood, who reported for the vendors.

Mr. CHARLES CLIFFORD (a director) assured the shareholders that every care had been taken, but time was pressing, and the directors were compelled to proceed rapidly with the business or lose the property. As a matter of fact, the directors were in possession of plenty of collateral evidence which they could scarcely make public regarding the great value of the property. The directors had every reason to believe that all that was stated in the prospectus was perfectly correct, and would be borne out by results.

The resolution for the adoption of the report and accounts was put and carried, and a vote of thanks was passed to the Chairman and directors.

A special vote of confidence was then proposed, and carried unanimously, and the meeting broke up.

EAST BLUE HILLS MINING COMPANY.

The first meeting of shareholders was held at the offices of the company, Gracechurch Buildings, on Tuesday.

Mr. J. Y. WATSON in the chair.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting.

The CHAIRMAN said: At the commencement of operations at East Blue Hills it was determined to raise sufficient money at once to prove the mine, and thus avoid making periodical calls upon the shareholders, and the accounts now presented show—Original capital, £5000; expenditure, 1862, £3, 7d.; sales of tin, 7137, 10s. 3d.; a cash balance in favour of the mine of 1809, £6, 8d., and there is no liability whatever. A large quantity of exploratory work has been done in clearing the adit and opening out the lodes, and Capt. Charles Thomas, of Cook's Kitchen, who inspected the mine in June estimated the ore then laid open at 50000. The sales of tin have been made from six heads of stamps only, the last sale for the month being 2½ tons. More stamps are in course of

erection, and in a month or two 20 heads will be at work, and be capable of returning 6 to 8 tons of tin per month, and give a profit (at 60¢ per ton) of about 2000, or 2500, per month. So that before the year is out the committee hope they may be able to declare a dividend of not less than 20 per cent. on the paid-up capital. They are assured that they are discovering much more tin than they are taking away, and, therefore, increasing the reserves, and in continuing the adit the West Killy lode will be intersected. I may add to this that the mine originally belonged to Mr. Pike, and when he offered it to me as a first-class speculation I advised him to divide it into 12,000 shares of 5s. each, and offer all the shares *pro rata* to the Blue Hills shareholders, retaining for himself and friends such shares only as were not accepted by them. This plan was carried out, and those who took their shares have been able to realise more than ten per cent. profit upon them. Now Mr. Pike is also the owner of Treowal, a mine similar to East Blue Hills, having four or five lodes running through it, and is between it and the great Parnassus St. George. Nothing has been done in the mine, as I understand, for 40 years, and then tin was little thought of, and it is considered that a small outlay in clearing out the adit may result in discoveries similar to East Blue Hills. No doubt the set is a valuable one, having regard to its similarity and close connection with East Blue Hills, and Mr. Pike has agreed to divide this into 12,000 shares of 2s. 6d. each, and offer them *pro rata* to shareholders in East Blue Hills, and out of the proceeds it is proposed to pay Mr. Pike 3000, which will leave 12000, to prove the mine. All shares not taken up by East Blue Hills shareholders will be taken at the 2s. 6d. each by Mr. Pike and his friends, and there is little doubt they will soon command a high price. A resolution will be proposed to you on this head presently. The Chairman added that the accounts had been printed in detail for the use of the shareholders. He moved that the accounts be received and adopted.—The resolution was put and carried unanimously.

The CHAIRMAN said that the report of Capt. Charles Thomas had been printed, and a copy will be sent to each shareholder.—Mr. C. B. PARRY then read the report of the agents, Capt. S. Bennetts and W. K. Mitchell.

The CHAIRMAN then formally moved the confirmation of the election of Mr. C. B. PARRY as secretary of the company. The resolution was seconded and carried. A formal resolution was then passed indemnifying the lessees in the usual form.—The CHAIRMAN mentioned that the lease was held from the Duchy of Cornwall.

Mr. WALTER PIKE said he fully endorsed all that Mr. Watson had said respecting the value and prospects of East Blue Hills Mine. The success in barely twelve months' working was unprecedented in the district, and every fathom driven both in the 40 and the adit level have been productive, and seem likely to continue so. A great point is that being drained to a depth of 50 fms. by an adit no engine power is required, and the mine can be worked at a remarkable cheap rate, and the reserves that are being opened up will last for years. Hitherto operations have been confined to the Balduh lode, as the committee wisely considered that it was better to make success here a certainty before exploring in other places and increasing expenses. It must be remembered, however, that the celebrated Pink lode has been intersected by the adit, and that by continuing the adit further south the lode which has proved so remunerative in West Killy will be met with. This is the lode which is now so very rich in West Killy. Both these lodes can be wrought at a moderate expense, and the fact of their running through the entire length of the set and drained to a depth of 50 fms. adds greatly to the value of the property. The CHAIRMAN said that Mr. Pike, who had been in the mine, was of opinion that it holds out chances of success very similar to East Blue Hills, with the same advantage of being drained by a deep adit and traversed by known lodes of value in the St. Agnes district, and as yet unwrought in this set. (Hear, hear.) In conclusion he (Mr. Pike) said he hoped that the next time the directors had the pleasure of meeting the shareholders they would still further have increased their credit balance, and he hoped that before Christmas they would see a dividend from the mine. (Hear, hear.)—The CHAIRMAN said it was at his own suggestion that Mr. Pike offered it to the shareholders.

Mr. MACMILLAN then moved a vote of thanks to Mr. Pike, and that the shares be offered to the East Blue Hills on the above terms, that 3000, be paid to Mr. Pike, and that it be called the North Blue Hills. He thought the scheme was an unusually reasonable one, and in marked contrast with the system which prevailed of late in the outset of these enterprises. (Hear, hear.)

Mr. ORLANDO WEBB seconded the motion, which was put and carried.

A vote of thanks to the Chairman and committee closed the proceedings.

FRONTINO AND BOLIVIA GOLD MINING COMPANY.

A meeting of shareholders of this company was held at the Cannon-street Hotel, on Wednesday.

Mr. T. E. FOAKES in the chair.

The CHAIRMAN said they were met there that day for the purpose of hearing Mr. White's remarks on his report. At the last meeting it was decided that they would not then read Mr. White's report, nor would they hear the explanations he wished to give upon it, and this meeting was, therefore, called to receive the report, and to hear Mr. White's explanations.

Mr. WHITE said that at the last meeting, although his report was not considered, it was more or less gone into on the one side by the Chairman's remarks, and on the other by the observations of several gentlemen, but to many criticisms he had no opportunity of replying then. Since that time several letters had appeared in the papers, and he would endeavour to answer some of the points that had been raised. One of the things which seemed rather strange to him in one of these letters was in reference to a question of the situation of the mines. On comparing the first page of the report with the thirteenth it was perfectly clear that he had explained how it was that the mine was placed in a position to produce 3400 or even 5000 tons of mineral a month, and yet they were not in a situation to stamp the mineral—that was to say, to reduce it; therefore, he had not promised or even hinted that by August they would be able to reduce 3400 tons of mineral per month. He said that by August he hoped they would see the expenses so far reduced that the mine would continue at almost the ordinary working cost, which he then anticipated would not exceed the sum of £10 per ton, and that would be including all expenses, and which will be reduced to £8 per ton when we are able to produce the full supply of mineral which the mines will be capable of giving us as soon as the works in connection with the Pouné water are completed. Further on, when he spoke of further cost of the mines per month being 50000, to stamp 3400 tons of mineral estimated to produce 1½ ozs. to the ton, something was said about 1½ ozs., but his preference was to put it at 1½. He spoke of stamps to be erected at the Rosario, San Joaquin, and other places, and he said that the amount of mineral to be produced in reference to the sketch he had given of the history of their mines he might say that previous to the year 1873, when he first knew their mines, the whole of the capital of the company had been laid out—upwards of 60,000; he thought in the balance-sheet it figured at 73,000. Up to 1873 the total produce had been 109,338, in nine years' work, from 1865 to 1873. For that produce the whole of the capital of the company was sunk, and there was not a cent remaining, and when he saw the mine in 1873, not only had that taken place, but there was not even a vestige of the mine. The Salada steam engine, which cost 12,000, had totally disappeared, and there was only a heap of ruins. From that time forward there had produced in the ensuing eight years 313,230, of gold. And how had that been done? That was done by taking the profits on certain portions of the property and paying off the debts on other portions of the mine. The mines were placed in 1876 in a position to produce upwards of 30,000, in 12 months. Since then they had gone on developing the mines and incurring a large expenditure in the way that was indicated in his report, but there was a great point to be noted in that, which all critics of their expenditure to answer some of the points that had been raised. The last 3½ years in round numbers of 184,000, only 18,500, had really been provided from capital. Another question had been asked, and it was how had the money been spent. Now in the whole of letters and in the whole of a long speech which was made at a meeting the other day he did not find one single reference to work done at the mines. The shareholders got month by month a clear statement of ground broken, of the work actually done in each mine, of the situation at the mines regarding water and so forth; they had a distinct statement of the productive work done, and of the unproductive work done, which they could compare with the money. He thought, therefore, that all the shareholders would do that, but it was only natural to suppose that those who came forward and criticised would do so. There was not a single mention made of any one of those points, and, therefore, he contended that it was perfectly open to him to say that none of his statements respecting the development of the mines, their present situation, and present capacity had in any way been affected by what had been said. To deny that they had spent 184,000, was to deny the accounts. Of course the money had been spent, and no one could deny it, and he was happy to say that the gold or produce had been extracted from their mine from the year 1873 forward without any more assistance than the total of 18,000, capital, and that was done with mines that in the year 1873 were not in a position to give any profit at all, but were actually giving a loss. As to whether the money had been properly spent he believed it had been extremely well laid out, and they had all the time been doing a large amount of prospective work, driving levels, and opening ground, and they had gained large reserves which would afterwards be taken out at proportionately lower cost, as everybody must know who had studied anything in relation to mining. Now, he did not really think that after calling attention to these figures and having anything more to say but to call attention to the reports which had been published month by month so as to carry out his statements respecting the amount of work done in the mine. He contended that the tons of ore which had gone to swell their reserve must be taken into account. He ventured to say, therefore, that the calculations respecting the cost per ton of ore, the cost per ton when the works which they had got now in hand or contemplation were completed—that those calculations were not erroneous. Reference had also been made to the high cost of their mines in a general way. Upon that he could say a great deal, but it seemed to him that generally speaking very little was known about Columbia. He referred to other mines in other parts to show that the conditions were not analogous, and consequently the comparisons were unfair. After entering into further details he spoke favourably as to the prospects of the company's several mines, especially in connection with their working with the Pouné water.

In reply to enquiries by shareholders, Mr. WHITE stated that by the end of the present year the Silencio will have received a larger supply of water, and 45 more heads of stamps will have been erected in Balala, San Joaquin, Cordoba, and Rosario. During the coming year an additional 40 heads will be erected in Silencio, Balala, Rosario, and Cordoba. That from August forwards the profit may be increased almost month by month during the ensuing fifteen months, at the end of which time we may hope to see the profit of 50000, per month as promised in my report.

Mr. WHITE, in reply to a question, said he did not think they would suffer any delays from damages to the Pouné waterworks. They could practically work without workmen on the watercourse, with the exception, perhaps, of the men for a month or two in the rainy season. Mr. WHITE expressed his regret at the discussion which had hitherto existed with a certain section of the shareholders. He had put himself in personal communication with Mr. White, from whom he had received explanations which were perfectly satisfactory, and he thought the shareholders might look for-

ward to the time when they would sell their shares at double their present price. He thought the shareholders were greatly indebted to Mr. White and his brother for the zeal and application they had shown in the interests of the company. He could readily understand that Mr. White had spent a large sum of money on this great undertaking in order to place it in a position of permanent prosperity and stability. It seemed to him that they had acquired an ample supply of water for a vast area of mining, and that the future of these mines was very good indeed. He could also say as a shareholder he received with great interest his monthly statements, and there were very few companies with which he was connected that gave such full and detailed information.

Some discussion ensued, in which Mr. SKAL and Mr. SUTHERLAND criticised the board and the management, and the CHAIRMAN having replied to the remarks, which were somewhat of a personal character.

On the motion of Mr. STAPLES, seconded by Mr. KOURO, it was unanimously resolved that the best thanks of this meeting be given to Messrs. White for their able management of the company's affairs, after which the proceedings terminated with a vote of thanks to the Chairman and directors.

NORTH PENSTRUTHAL MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices of the company, Draper's-gardens, on Wednesday.

Mr. JAMES PETRIE in the chair.

Mr. EDWARD ASHMEAD (the secretary) read the notice convening the meeting, and the minutes of the preceding meeting, which were confirmed. The accounts for the four months ending with the costs paid May 20 showed a balance of liabilities over assets amounting to 891l. 17s. 2d., including calls in arrear 266l. 11s. 6d., and calls on forfeited shares 70l. 15s. The agent's report was also read. It was as follows:—

July 17.—Since the last general meeting the sinking of Highburrow Shaft has been decided to the 133 fms. level, ground penthouse taken down, the shaft divided and cased, with skip road fixed complete to the bottom, where we have commenced cross-cutting north to the lode which is being pushed on with all possible dispatch, and which from the underlie of the lode, as seen in the 120, we expect to reach in about 2 fms. driving (5 ft. which is already driven); this we consider an important point, looking at the change of ground and general character of the lode in the 120. The 120 fms. level is driven west of shaft 43 fms., 21 fms. of which have been driven in the past four months; driving by four men in a lode, varying from 4 ft. to 5 ft. wide, composed of quartz, capel, munde, occasional stones of tin, and a little black oxide of copper. We advise the extension of this end with as little delay as possible to prove the ground, which is of a friable nature, to the west of the cross-course and where little or no work has been wrought. The lode in the 108 fms. level, driving west of shaft, is 4 ft. wide, producing occasional stones of tin; this level is driven west of shaft 41 fms., 11 of which have been driven since last meeting. Our progress here is not so good as at the 120, owing to a change in the strata in the deeper levels. The lode in the 108 fms. level, driving west of shaft, is 2½ ft. wide, at present unproductive. The 88 fms. level cross-cut is driven north 64 fms., and is now in the elvan course to the south of the lode, which is hard and makes it slow of progress; we are daily expecting to get through it and to reach the lode in 4 fms. or 5 fms. driving if the underlie continues as seen above the adit. The bottom of the mine presents a good feature, both from the change in the ground and in the general character of the lodes. No. 2 north lode, which is coming in conjunction with the Highburrow lode (seen by the cross-section sent to the adventurers), being 7 fms. apart at the 132, and making the junction at the 144 fms. level. Such junctions seldom or ever fail to make good deposits of mineral.—STEPHEN DAVEY, WILLIAM FOLKINGHORNE.

The CHAIRMAN said that although on two points referred to had not yet been reached, the committee thought it advisable that Capt. Josiah Thomas, of Dolcoath, should again inspect the mine. He had done so, and the secretary would read his report.

Mr. ASHMEAD read the report referred to.

The CHAIRMAN stated that a few weeks ago he spent a couple of days on the Penstruthal mines—North and South—the mines were contiguous to each other, and from observation and enquiry on the spot he satisfied himself fully as to their general condition, and as to the correctness of Capt. Davy's reports. From what he had seen hitherto he had every reason to believe that Capt. Davy had the interests of the company thoroughly at heart, and that he would continue his exertions to make these mines a success. As reported, fairly good progress was being made in driving and sinking, and at a cost that would bear comparison with any mines in the district. It would be within their recollection that Captain Thomas, of Dolcoath, in his report of Nov. 3 last mentioned the favourable change that had taken place in the 120, and he urged rapid sinking to ascertain what further change might take place at another level. At that date the 120 was driven on the lode 12 fms. west of Highburrow shaft, which had now been driven 45 fms. west of the shaft, and Capt. Thomas now reported that the granite was of a favourable character, that the lode was of a good size and had a promising appearance. He trusted that the indications might be at least equally favourable at the 132, and if so, the committee would feel greatly encouraged to sink as rapidly as possible down to the junction of the No. 2 lode with Highburrow shaft, as urged in Capt. Thomas's report. From the statement of accounts it would be seen that their financial position was much about the same as it was four months ago—the balance against the company being very slightly reduced.

Mr. H. WADDINGTON moved the adoption of the reports and accounts.—Mr. ASHMEAD seconded the motion, which was carried without discussion.

The CHAIRMAN said the next question was that of finance. The next period would include five months' labour costs, and the committee having carefully considered the matter were of opinion that a call of 4s. per share would be required. He moved a call of that amount, payable on or before Aug. 10.—Mr. WADDINGTON seconded the motion, which was carried.

A SHAREHOLDER asked whether anything had been done with the forfeited shares?—The CHAIRMAN replied that the committee felt that it would be better to wait until something occurred at the mine to increase the value of the shares before doing anything with them.

Mr. ASHMEAD asked how many shares were forfeited?—Mr. ASHMEAD said 70 were forfeited, and 40 were relinquished. Nothing was lost on the relinquished shares, which were paid-up to the date of relinquishment.

A vote of thanks to the Chairman closed the meeting.

SOUTH PENSTRUTHAL MINING COMPANY.

A four-monthly meeting of shareholders was held at the offices of the company, Draper's-gardens, on Wednesday.

Mr. JAMES WALTON in the chair.

Mr. EDWARD ASHMEAD (the secretary) read the statement of accounts, which showed that the labour cost had been 7904. 4s. 11d.; the merchants' bills, 6121. 0s. 2d.; the mine rents, 121. 10s.; and the payment for insurance under the Employers' Liability Act, 31l. 17s. On the other side the last call realised, 1355l. 15s.; the out receipts as against insurance, 37. 18s. 4d.; and the discount, 24. 4s. 4d. The balance of liabilities over assets was 9685. 10s. 1d. The following report was then read.

July 17.—Since the last general meeting, Walton's engine-shaft has been sunk to the 53, 9 fms. 2 ft. of which have been sunk in the past four months. The lode in the shaft is 7 ft. wide, of a good matrix, and embedded in a beautiful strata, and is producing a little black oxide of copper. From its appearance and character I am daily expecting to meet with copper in paying quantities. Should the lode at this point prove as rich as appearances indicate, we should speedily open up a large quantity of ground at various levels from the flat-roof shaft.—Simmon's Shaft: We have cleared and secured this shaft from the 90 to the back of the 60 fathom level, and have removed the men to clear the 60 fathom level west of engine-shaft, to facilitate the further clearing of Simmon's shaft, to examine the water ground and better secure the mine below. The 30 cross-cut is driven south 83 fathoms. Finding nothing of value, we suspended this, and the driving west on the branch.—Flat-roof Shaft: This shaft has been cut down to the 130, plat cut for the reception or lodgment of stuff, shaft divided and cased, with skip-road completed to bottom, and the shaft sunk about 8 ft. below. The shaft set to nine men, and will be vigorously prosecuted to reach the 142. The cutting of the 40 balance-bob pit has been completed, bob fixed, and is working. All the plant and machinery are in good order and working well. The lode in the 130 is 3 ft. wide, composed of sulphuric munde, through which it has been and is an object to get believing from all experience, a rich deposit of yellow ore exists, that will render the mine as famous as in past days.—S. DAVEY.

The CHAIRMAN proposed the adoption of the report.—Mr. JAMES PETRIE seconded the motion.

Mr. McKEARD suggested that an inducement should be given to the men to sink faster.—Capt. DAVEY remarked that this had been done in another case with every success.

Mr. McKEARD: Do you see any change from what it was 20 fms. higher?

Capt. DAVEY: I never saw a greater change. I am speaking of the flat-roof shaft. That is, from the 110 to the 120 in South Penstruthal the lode has parted of a different character, from chloride to quartz, in which the great riches of the Gwennap district is produced.

Mr. WADDINGTON said he meant to propose that the secretary be requested to invite tenders for the sinking of the flat-roof shaft by boring machinery. There would be no risk to us. All we should be required to find would be a boiler to supply steam. It would be a great saving. It was only the prejudice of the people that had prevented the great success of boring machinery.

Mr. JAMES PETRIE moved a call of 5s. a share.—Mr. McKEARD seconded the motion, which was agreed to, the Secretary saying that the arrears were as far as he knew perfectly good.

It was decided to leave the matter of the sinking of the shaft by boring machinery in the hands of the committee.—A vote of thanks to the Chairman and committee closed the proceedings.

CATHEDRAL CONSOLS MINING COMPANY.

The four-monthly meeting of shareholders was held at the offices of the company, Draper's-gardens, on Wednesday.

Mr. JAMES LADY in the chair.

Mr. EDWARD ASHMEAD (the secretary) read the notice calling the meeting. The accounts, which showed a balance of liabilities over assets of 2932. 0s. 5d., were taken as read.

The report of the agent was as follows:—

July 16.—Since the last general meeting we have sunk the engine-shaft 3 fms. below the 60, out clister-plat, bearer-tees, ground for pole connection, with in bearers, clister, brought down the main rods from the 30, fixed a 12-in. plunger pole to lift the water to the 30, with dividing, casing, and fixing permanent roadway and slays, &c., complete. We have also driven a better surface than the previous one which we have for future use. The lode in this shaft is from 3½ to 3 ft. wide, composed of quartz, fluor-spar, munde, and copper, worth of the latter 10 ozs. per fathom. The lode in the 60, driving east of the shaft, is 2½ ft. wide, producing occasional stones of copper, and from the appearance of the lode in the mine above we expect an early improvement. We have suspended

SCOTCH MINING AND INDUSTRIAL COMPANIES
SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, sharebroker and ironbroker (July 20), writes:—During the past week the tendency of prices has been more favourable, owing to the improved condition of trade, and, should the Egyptian crisis be satisfactorily settled and some better weather experienced, no doubt business would get brisker and prices improve. The money market remains easy.

In shares of coal, iron, and steel companies the principal business has been in Marbells, which have advanced to 6½ on expectation of a favourable interim dividend. In the Scotch pig-iron market the price of warrants has advanced from 50s. to 51s. 1½d. A considerable business has been done since the holidays, and the tendency of prices seem still favourable, as makers' iron is scarce, and held at full prices in second hands. Altmans are at 25s.; ditto (bonds), 7s.; Chapel House, 12s. 6d. to 17s. 6d.; and Skerrie Iron, 49s.

In shares of foreign copper and lead concerns prices are firmer. Thais have improved from 40½ to 41½, and the decision in their Court of Session case is expected immediately. Russia 6 per cent. debentures offered. Norway copper (12s. 6d. paid) 5s. to 10s.; Pierrefitte, 7s. 6d. to 12s. 6d.; Santa Cruz, 4s. to 6s.; and Vicaya Santander, 12½.

In shares of home mines prices are not much altered, but shares are net very much offered. Some parties are now beginning to think that the day is not far distant when Wheel Jane will be a paying concern once more; for the four weeks ended July 5 this mine produced 13 tons of tin, which at present price would yield 765s., and their labour cost has been reduced to 582s. for the four weeks, and it is believed the returns can be increased. Bell Vein are at 10s. to 15s.; Carr Cambrone, 10s. to 15s.; Caron, 1s. 6d.; East Wheel Rose, 5s. to 12s. 6d.; East Lovell, 15s. to 20s.; Grogwin, 20s. to 30s.; Great Holway, 4s. to 5s.; Indian Queen, 3s. 9d.; Mellanear, 4s. to 5s.; Mount's Bay, 5s. to 7s.; New Terras, 42s. 6d.; Old Orlacombe, 1s. 6d.; Old Shepherds, 5s. to 7s.; Pelyn Wood, 2s. to 3s.; Parka, 3s. 9d.; Pennant, 52s. 6d.; Rhosmor, 55s. to 65s.; South Devon, 15s. to 20s.; South Condurrow, 8 to 8½; Tamar, 5s. to 7s. 6d.; Treaveen, 5s. to 7s. 6d.; United Van and Glyn, 7s. 6d. to 12s. 6d.; Van, 5½ to 6; Walkham United, 5s.; Wheel Comfort, 30s. to 40s.; Wheel Coates, 7s. 6d. to 10s.; Wheel Fortune, 10s. to 15s.; and Wheel Owles, 6 to 8.

In shares of gold and silver mines there is no particular alteration to notice. Asia Mining are 2s. 6d. to 10s.; Consolidated, 3s. to 5s.; Collar Bls., 7s. 6d. to 10s.; Oldham, 5s. to 7s. 6d.; Oldham, 1s. 6d.; Colombian Hydraulic, 4s. to 6s.; Gold Coast, 20s.; Guinea Gold Coast, 10s.; Hawkins' Hill, 5s. to 7s. 6d.; Indian Trevelyan, 12s. 9d. to 16s. 3d.; Indian Consolidated, 15s. to 17s. 6d.; Isabelle, 7s. 6d. to 12s. 6d.; Indian Kingstons, 5s. to 7s. 6d.; Kapanga, 15s. to 17s. 6d.; Mysore Reef, 2s. 6d. to 3s. 9d.; New Collar, 7s. 6d. to 12s. 6d.; New Gold Run, 4s.; ditto (pref.), 3s. 9d.; Organo, 45s. to 55s.; Quartz Hill, 3s. 6d.; Rio Grande do Sul, 1s. to 2s.; Rhodes Reef, 15s. to 17s. 6d.; Simon's Reef, 2s. 6d.; and Victorine, 10s. to 15s.

In shares of oil and miscellaneous companies, Glasgow Coal Exchange shares show the principal alteration, having been given away owing to the liability on them. Clyngwyn Slate Debentures are at 15s. to 25s.; Droitwich Salt, 20s. to 30s.; and Lawes Chemical, 5½ to 6.

EDINBURGH.—Messrs. THOMAS MILLER and SONS, stock and share brokers, Princes-street (July 19), write:—The railway markets have shown increased strength during the past week. Caledonian ordinary stock has improved from 104½ to 104½, North British from 93½ to 94½, Glasgow and South Western from 118 to 118½. Sheffield Deferred and Great Eastern have been decidedly better on the dividend announcements of their respective companies. Brighton Deferred has been very excited, and has fallen from 124½ to 114½. South Eastern Deferred has declined from 121½ to 120½. Canadian have been very good. Grand Trunk Ordinary has risen from 19½ to 21. The Scotch Preference from 87½ to 89½. The Telford from 44½ to 46½. Americans have been very strong. New York, Pennsylvania, and Ohio First Bonds have advanced from 44½ to 49, the Second from 15 to 18, the Third from 8½ to 9½. Erie shares from 38 to 41, Ontario from 27 to 30½, Oregon Preference from 49½ to 54½, Reading from 32 to 31. Bank of Scotland stock has improved from 305 to 306, British Linen from 295 to 297, National from 300 to 302, Royal from 213 to 214. Insurance shares have been quiet. North British Mercantile have declined from 58 to 57½, and Scottish Union and National A have risen from 71s. 6d. to 72s. 6d. Aristocrat Coal shares have declined from 10½ to 10¼. Huntingdon Copper from 38s. to 34s. Burnt Island Oil from 11½ to 10½. Balmory Oil have risen from 19½ to 20. Colonial and American Property Companies are little changed. Hudson's Bay shares have improved from 32½ to 30½.

IRISH MINING AND MISCELLANEOUS COMPANIES SHARE
MARKET.

CORK.—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (July 19) write:—Markets were steadier to-day, and a good business was done in Great Southern stock 112½; Midlands also changed hands at 80½, and Northerns at 116½. National Banks very steady at 23½, and Hibernians at 31½. Munsters were done at 7½. No change in Provincial. Cork Steam Packets changed hands at 10½, and Lyons shares at 5½. Goudings remain 8½, and Brewery shares were asked for at 5½. No change in Gresham Hotels or Harbour Board Debentures.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE HOTEL METROPOLE (Limited).—Capital 85,000l., in shares of 100l. To establish and maintain a club-house, hotel, tavern, &c. The subscribers are—F. Gordon, Bentley Priory, 150; E. H. Byer, 25; Blaise Park, 20; A. Gordon, 27; Cheapside, 20; H. L. Hammack, 69; Bishopsgate-street, 20; J. Pound, 21; Leadenhall-street, 20; F. J. Thompson, 12; Camden-square, 20; A. R. Holland, The Grand Hotel, 50.

ELLIS AND COMPANY (Limited).—Capital 10,000l., in shares of 5l. To purchase and carry on a business of a bicycle manufacturer, established at 165, Fleet-street. The subscribers (who take one share each) are—J. Boothroyd, Greenwich; J. Orlebar, Sharnbrook; J. Beale, Blackheath; E. H. Straw, Greenwich; J. J. Camley, Chiswick; E. Logsdair, Greenwich; A. A. Clark, 17, St. Swinith's-lane.

THE WORKS CONSTRUCTION COMPANY (Limited).—Capital 20,000l., in shares of 1l. To construct railways, tramways, water works, gas, and other works, &c. The subscribers (who take one share each) are—A. Honeybourne, 3; Bucklersbury; S. J. Lear, 62; Redcliff-road; J. Smith, Tottenham; W. Alexander, 117; Brixton-road; R. H. Elmore, Shortlands; H. Moulding, Bermondsey; W. R. Parker, 11, Glen-gall-road.

UNITED KINGDOM STEAMSHIP COMPANY (Limited).—Capital 200,000l., in shares of 10l. A shipowner's business in all branches. The subscribers are—R. Bird, Cardiff, 100; R. Cory, Cardiff, 500; E. R. Moxey, Cardiff, 100; L. Williams, Cardiff, 100; R. Short, Cardiff, 150; M. Dunn, Cardiff, 150; J. T. Hutchins, Cardiff, 100.

THE LAND CORPORATION OF IRELAND (Limited).—Capital 1,050,000l., in shares of 5l. and 100l. To acquire lands and hereditaments, and to hold, occupy, let, mortgage, or otherwise deal with the same. The subscribers (who take ten shares each) are—Earl of Rosse, Birr Castle; Marquis of Ormonde, Kilkenny Castle; E. R. King-Harman, Rockingham; A. Kavanagh, Borris; B. E. B. FitzPatrick, M.P., Granton Manor; Lord Ardilarnie, St. Anne's; C. G. Tottenham, M.P., Ballycurry; C. J. Kennan, 52, Threadneedle-street.

WEST MIDDLESEX ELECTRIC LIGHTING COMPANY (Limited).—Capital 100,000l., in shares of 5l. The business of electricians in all branches. The subscribers are—J. J. Swan, 110, Cannon-street, 20; W. G. Colley, Partingdale, 20; C. J. Parker, Hammersmith, 20; J. Barnes, Hammersmith, 1; F. Wingrove, Hammersmith, 1; H. Pickersgill, 87, Arlington-road, 10; G. W. Hutchinson, 1, Laurence Pountney-hill, 1.

SOUTH GOLD COAST MINING COMPANY (Limited).—Capital 75,000l., in shares of 1l. To purchase or otherwise acquire the lands, hereditaments, mines, minerals, veins, lodes, mineral bearing rock and deposits, mining and water rights of parts of the properties known as Abbotwayakoon and Bonnat's concession, in the Wassau district, or province, near Axim, on the West Coast of Africa, for the purpose of prosecuting all operations connected with gold mining. The subscribers (who take one share each) are—W. F. Day, 79, Great Mark's-square, clerk; G. C. Crowley, 3, North-street, clerk; W. J. Hurst, Peckham, clerk; W. R. Parker, 11, Glengall-road, accountant; H. Moulding, Bermondsey, merchant; W. Jackson, 134, Falmouth-road, clerk; J. Birket, 100, Sweetland-road, clerk. The following constitute the board:—H. Wright, A. J. Altman, W. A. Barron, and H. B. Franklyn. The qualification is fixed at 100 shares, and the remuneration 600l. per annum to be divided.

THE BELT COPPER MINES (Limited).—Capital 250,000l., in shares of 5l. To adopt and carry into effect an indenture made between F. Ellerhausen, of Nova Scotia, and A. B. Cunningham, of Windsor, of the one part, and the company of the other, for the purchase, developing, and working of the Penn, Bohemian, and Great Western Mines, situate in the county of Ontonagon, in the State of Michigan, United States of America, and generally to carry on the business of

mining and quarrying in all branches. The subscribers (who take 50 shares each) are—Denbigh, Newnham Faddox, peer; K. H. James, 10, Austinfriars, metal broker; H. J. B. Kendall, 12, Great Winchester-street, merchant; E. Wolseley, 151, Cromwell-road, esquire; M. Low, 22, Roland Gardens, esquire; J. P. R. Cunningham, Kingston Hill, esquire; H. Weld, 2, Savile-row, esquire; W. Auld, 43, Queen's Gardens, esquire. The first directors are—The Earl of Denbigh, Messrs. James, Kendall, Wolseley, Low, and J. Sandeman. The qualification is the holding of shares of the nominal value of 250l.

THE SAN MIGUEL CONCESSION (Limited).—Capital 6000l., in shares of 5l. To acquire mines and minerals, mining rights, concessions, &c., in the state of Colorado or elsewhere, and to work and develop or otherwise deal with the acquisition made by the company. The subscribers (who take one share each) are—W. Kirkman, 47, Old Broad-street, gentleman; H. G. Plaskett, Tottenham; W. B. Downs, Tulse Hill Park, contractor; J. Kirwan, Peckham Rye, surveyor; G. R. Harrison, Shepherds Bush, solicitor; R. B. Coe, Imperial Buildings, solicitor; Rev. A. Roberts, Epsom. There are no articles registered.

THE OELHEIM PETROLEUM COMPANY (Limited).—Capital 100,000l., in shares of 10l. To acquire, work, and develop properties situated at Dolbergen, Oedesse, and Abbenson. The subscribers (who take one share each) are—D. Ainsworth, 17, Laurence Lane; J. A. Josolyne, 28, King-street; W. C. Fowler, 181, Aldersgate-street; E. H. Rayley, Newington Causeway; A. O. Miles, 28, King-street; J. Henderson, 32, Monkwell-street; R. Conert, 32, Monkwell-street.

THE HEALEYFIELD MINING COMPANY (Limited).—Capital 30,000l., in shares of 1l. To purchase or otherwise acquire certain leasehold lead mines situated in the parish of Muggleswick, Durham, along with the plant and machinery belonging thereto, and to fully develop and work these, and any other mines in England, Scotland, or Wales, and generally to carry on all operations incidental to a mining company. The subscribers (who take one share each) are—A. T. Windship, Newcastle-on-Tyne, colliery viewer; J. Bell, Newcastle-on-Tyne, gentleman; T. D. Challoner, Newcastle-on-Tyne, accountant; J. W. Waugh, Newcastle-on-Tyne, shipowner; T. B. Barker, Westoe, gentleman; J. T. Dransfield, Newcastle-on-Tyne, hosiery; T. H. Atkinson, Newcastle-on-Tyne, merchant. The first directors are—Messrs. W. Whitwell, J. Blenkiron, H. Pritchard, J. Monks, and E. Reid. The number must not be less than five or more than 10.

THE ELECTRICAL INSULATOR MANUFACTURING COMPANY (Limited).—Capital 100,000l., in shares of 1l. The business of electricians, mechanical and chemical engineers, &c. The subscribers (who take one share each) are—R. Marsh, 79, York-road; E. H. Wilson, 18, Buckingham-street; J. Evans, Haverstock Hill; S. H. Barlow, 38, Warbeck-road; C. Bate, 78, Alexander-road; C. E. Hewitt, Anerley; T. T. Bradfield, 193, Clapham-road.

CARDIGANSHIRE MINERAL CORPORATION (Limited).—Capital 50,000l., in shares of 1l. To purchase a lease for the working, mining, and searching for lead ores, argentiferous lead ores, copper, tin, and all other ores in a property known as Cefn Cwm Brwyno, parish of Llanbadarnfawr, Cardigan, containing 325 acres in extent, or thereabouts, and also to acquire the plant, machinery, tools, sheds, buildings, fixtures, and effects, and the power to work, let, sell, mortgage, or otherwise dispose of the same. The subscribers (who take one share each) are—G. A. Williams, 88, Bishopsgate-street Within, mining agent; R. Delatore, 7, Southampton Buildings, parliamentary agent; J. A. Poulter, 31, Threadneedle-street, stock and share dealer; H. C. Taylor, 35, Duke-street, no occupation; H. C. Doman, 3 and 4, Fowkes Buildings, accountant; H. Randall, 7, Southampton Buildings, solicitor; F. Forbes, 31, Threadneedle-street, clerk. The consideration of the purchase of the foregoing property is fully paid-up shares, to the value of 10,000l., and 30,000l. in cash. Any shareholder is eligible to become director.

THE HENDRA ESTATE AND BUILDING MATERIAL COMPANY (Limited).—Capital 60,000l., in shares of 1l. The manufacture and sale of bricks, tiles, terra-cotta, cement, and other similar materials. The subscribers (who take one share each) are—E. Nunneley, 6, Station-road; G. Fuller, 9, Austin Friars; J. F. H. Baker, Clapham; W. Hogg, 11, Austin Friars; M. B. Rochfort, Dulwich; H. W. Wallis, Oxford; A. S. Hutchinson, 11, Guildhall Chambers.

THE OAKLEY SLATE QUARRIES COMPANY (Limited).—Capital 255,000l., in shares of 5000l. To purchase and continue the working of slate quarries, in the parish of Festiniog, Merioneth. The subscribers (who take one share each) are—W. S. Forster, 28, Lincoln's Inn Fields; G. Whitley, Cambwell; A. Hoare, 37, Fleet-street; E. Bond, Hampstead; A. M. Dunlop, 3, Old Palace-yard; S. Pope, 38, Parliament-street; J. S. Beale, 28, Great George-street; T. A. Welton, Clapham.

THE WASSAW AND AHANTA GOLD MINES SYNDICATE (Limited).—Capital 10,000l., in shares of 50l. To adopt and carry out the provisions of an agreement for turning a syndicate into a company, and for that purpose to acquire from the parties being the syndicate the mines, minerals, mining rights, concessions, lands, &c., situate on the Gold Coast. The consideration being the allotment of fully paid-up shares to the syndicate members equally in amount of the shares held by them respectively. To exercise all mining or other rights, privileges, or powers over the property, or to sell, lease, let, or otherwise dispose of same. The subscribers are—F. Sheffield, 25, Cullum-street, solicitor; I. H. M. Hobbs, Lloyd's, insurance broker; 2; A. H. Griffiths, Lloyd's, insurance broker; 1; W. Robinson, Lloyd's, shipowner; 1; S. Lambert, 4, Temple Gardens, barrister; 1; F. Rudall, Victoria Station, telegraph engineer; 1; C. R. Dawson, Ealing, gentleman; 2.

THE PADSTOW, TRURO, AND NORTH CORNWALL LAND AND HOTEL COMPANY (Limited).—The subscribers (who take one share each) are—B. Fletcher, 8, Old Jewry; R. J. Bodin, Tower Chamber; E. R. Walsley, Clapham; J. Ryder, 36, Burlington-road; J. Ems, Chelsea; W. H. Stonier, 8, Croftdown-road; W. Butler, Caterham.

HILL'S PATENT MASONIC FLAG COMPANY (Limited).—Capital 10,000l., in shares of 10l. The manufacture of paving flags, tiles, and concrete materials, &c. The subscribers (who take one share each) are—W. Smales, Macclesfield; H. Hill, Macclesfield; E. Roston, Macclesfield; J. Stamford, Macclesfield; J. Bower, Macclesfield; T. Byatt, Macclesfield; H. Brown, Macclesfield.

J. AND S. TAYLOR (Limited).—Capital 30,000l., in shares of 10l. To acquire and continue a cotton spinning and doubling business at Bower's Mill, Stainland. The subscribers (who take 20 shares each) are—J. Taylor, Stainland; S. Taylor, Huddersfield; W. Taylor, Birkstall; S. E. Brook, Birkstall; B. Taylor, Stainland; A. Whitworth, Birkstall; S. H. Taylor, Huddersfield.

THE ABERGEELE HEMATITE COMPANY (Limited).—Capital 10,000l., in shares of 10l. To purchase, or otherwise acquire and work mines, minerals, and mining rights in the United Kingdom, and particularly the lands, minerals, and mining rights at Nant Uchaf, Tyddyn-y-Morgan, and Nant Fawr, situate in the parish of Abergelle, Denbigh, together with the plant, machinery, implements, and buildings in or about the same; to work, quarry, and get hematite, iron ore, manganese, and manganeseiferous iron ore and other minerals. The subscribers (who take one share each) are—J. Launceston, Mostyn, M.E.; J. Thernburn, Ditton, ironmaster; W. Shone, Chester, accountant; T. Worthington, Old Elms, accountant; J. Pae, Wigan, out of business; F. Richards, West Houghton, actuary; W. Wight, Rhyll, zinc smelter.

WEST AFRICAN GOLD FIELDS (Limited).—Capital 100,000l., in shares of 2l. To acquire by purchase or otherwise lands, estates, mines, mineral grants, mining rights and privileges, ores, minerals, and other properties on the West Coast, and to adopt and carry into effect an agreement made between J. W. Reader, of the one part, and C. B. Walker, as trustee for the company; To carry on the general business of miners, smelters, washers and reducers of ores, minerals, and other auriferous substances. The subscribers (who take one share each) are—P. Sleigh, Islington, merchant; J. T. Rawlings, Canonbury-square, clerk; G. Ungay, 32, Ladbrooke-grove, no occupation; F. S. Bastow, Wimbledon, merchant; G. Martin, West Brompton, no occupation; R. H. Sheppard, Guildford-street, accountant; E. Schubert, 32, St. Swinith's-lane, accountant.

SMITH, GARRETT, AND COMPANY (Limited).—Capital 450,000l., in shares of 20l. To acquire and carry on an established brewer's

and malster's business. The subscribers (who take one share each) are—T. V. Smith, Thames Bank Distillery; M. Garrett, Alchburgh; J. Garrett, Bow; E. Garrett, East Ham; H. Cowell, 2, Hare-court; E. Carter, jun., Ryde; J. Hall, Bromley.

THE PROPERTY TRUST CORPORATION OF LONDON (Limited).—Capital 1,000,000l., in shares of 10l. The subscribers are—W. E. Heath, 176, Camden-road, 10; H. Mornbert, 58, Loftus-road, 10; T. H. D. Allen, 217, Camden-road, 10; F. V. Mills, Lee, 10; J. P. Baker, 6, York-place, 10; F. Meakin, 6, Martin's-lane, 10; H. A. P. Rooke, Esher, 5.

THE STEAMSHIP "CHIGWELL" (Limited).—Capital 21,000l., in shares of 328l. 2s. 6d. Purchasing, owning, and working said steamship. The subscribers are—A. Stuart, 29, Great St. Helen's, 26; J. Eyre, 11, Albemarle-street; 1; W. F. Wilson, 2, Billiter-square, 1; R. A. McCallum, 3, Binfield Villas Park, 1; H. B. Barnett, 29, Great St. Helen's, 1; H. Philby, 29, Great St. Helen's, 1; G. Hardy, 29, Great St. Helen's, 1.

THE TIN DEPOSITS OF QUEENSLAND.

Much attention has from time to time been directed to the tin deposits of the Wilde River in Queensland, and already the interesting report of the Rev. J. E. Tenison-Woods, F.G.S., F.L.S., to the Government has been referred to in the Journal. He has now furnished some further details, which will not be less acceptable. After mentioning the favourable notice which his official report in this country received, he remarks that "the Editor of the Mining Journal after its perusal goes so far as to say that 'it cannot be doubted that the vast deposits of tin in Australia are destined at no distant date to supply a large proportion of the metallic tin required for the supply of the markets of the world.' Let us hope that these anticipations may be realised, as I have no doubt they will." He premises, for the sake of clearness, at the risk of repeating what he has already said, that the Herberton tin mines lie upon the slopes and crests of granite spurs from a great granite range of mountains which run in a north and south direction about 50 miles from the coast. It is not the main dividing range, but lies to the west of it; and though it is usually much higher than the main divide, yet it is broken by large gaps and valleys, through which the western waters flow. Thus the Mitchell River and its many tributaries flow through a gap in the granite range between Port Douglas and the Hodgkinson gold field. The spurs of granite make a division between the northern and southern waters. It is on a division of this kind that the tin districts occur. The Herberton lodes are on one of the eastern spurs; and seven miles away on the western side is another tin field called the Great Western. The Wilde River flows southward into the Herberton below Cardwell. The Barron flows through the hills in a generally easterly and north-easterly course until it reaches the sea in Trinity Bay. Thus they are both eastern waters. The Great Western tin field is on some creeks which eventually reach the Tate and Walsh and flow through the Mitchell into Carpentaria. Now, I am of opinion that the granite axis was formerly the dividing range; but evidently there has been a great outpouring of volcanic rock on the summits and eastern sides of this granite. These trap rocks now divide the waters, and I think that the change has happened in the more recent tertiary times.

A good many lodes, he says, have been found, which no doubt will be permanent and very rich; but there are always near them capings which at present pay better for working. As far as they are known, the lodes are wide and rich. There is some variation in the direction they take and in their dip, but as a rule they have not much underlay. At Herberton the average direction is a little east of north and west of south. On the western side of the granite range the average direction is west of north and east of south; so that the lodes converge towards the central axis according as they run north. But this generalisation requires a more extensive knowledge before it can be held as certain. The reefs or lodes are like those of Cornwall, and have the same variable character in thickness and direction, and they are probably as rich, as abundant, and as valuable. That they will prove permanent I have not the least doubt. There is one very obvious proof of this before our eyes. Lodes are found on the highest hills and in the lowest valleys, and those in the valleys are often the richest and best; as, for instance, the prospecting claim. The ore as it is stacked on the surface varies in value from 15 to 60 per cent. of tinstone, which contains about 75 per cent. of pure tin. There is also much poor stone, with less than 10 per cent. This would not pay to crush now, but the time will come when all these ores will be utilised. Ores with only 1 per cent. of tin are worked in Cornwall at a profit. There is some difficulty in getting the ore to the coast, as for some months the roads are completely blocked. At one time the ore just as it was raised was sent to the coast on horse-wagons or on packs with horses and mules. That any but the very richest and heaviest ores could be thus sent at any sort of profit most persons will be slow to believe. It must be crushed, washed, and carefully dried first, and up to this the requisite mechanism is miserably below the wants of the field. One cannot imagine a mining district with greater disadvantages than Herberton. Bad roads, expensive carriage, no machinery, great distance from the markets, hostile natives, and other perils are a few of the drawbacks. Yet in spite of all these large fortunes have already been made at these tin mines, so this will tell us what must be the richness of the tin and copper lodes.

CONFERENCE ON MINING ACCIDENTS.—The fourth annual conference of the authorities of miners' permanent societies and others interested in movements for relieving distress occasioned by accidents in mines was held last week, under the presidency of the Earl of Crawford and Balcarres, at the Society of Arts. The central society formed of these authorities has a council representing the various mining districts, and the vice-presidents include the Marquis of Bute, Lord Derby, Lord Fitzwilliam, Lord Durham, Lord Wharfedale, Lord Lathom, Lord Halifax, Lord Tredegar, Lord Aberdare, Lord Gerard, Lord Richard Grosvenor, Sir George Elliot, M.P., and other mineowners. The objects of the association are to promote the formation of societies in districts where they do not exist, to watch Parliamentary actions concerning industrial assurance, to enquire as to surplus relief funds, and to carry out plans for relieving the risks of permanent societies. Mr. G. L. Campbell read the annual report of the Central Association formed of the miners' permanent societies in operation in Northumberland, Durham, North Staffordshire, Lancashire, Cheshire, the West Riding of Yorkshire, the Midland counties, North Wales, Monmouthshire, and South Wales. A table of the position of these societies showed that during the year 1881 the members had increased from 129,815 to 142,417; the accumulated funds had increased from 133,078l. to 149,267l.; the revenue had increased from 97,894l. to 105,509l.; the number of widows receiving annuities had increased from 864 to 1031; the number of children in receipt of relief had increased from 1830 to 2118; and the "disabilities" had increased from 22,153 to 23,542. The societies had had peculiar difficulties to contend with in 1881, owing to the coming into operation of the Employers' Liability Act, but these difficulties had not impeded the growth of the societies. The Chairman, in moving the adoption of the report, congratulated the conference upon the steady growth of the various societies during the past year. Referring to the Employers' Liability Act he said that, so far as his experience went, there had been no bitterness or antagonism arising out of the Act. Archdeacon Sir Lovelace Stamer, representing the North Staffordshire Society, seconded the motion for the adoption of the report, and urged that men and employers should do for themselves through these societies what commercial companies proposed to do for them. The report was adopted unanimously, the President, the vice-presidents, and council were re-elected, and a resolution was passed approving the principle of federation, and authorising the council to take such steps as they might deem necessary to carry it into effect. The conference closed with a vote of thanks to the President.

FOREIGN MINING AND METALLURGY.

The French iron trade has remained firm, without any appreciable change. Bars have been maintained with firmness at 87. per ton, and an advance is regarded as probable, having regard to the activity of the demand. The imports of iron minerals into France in the first five months of this year are returned at 560,833 tons, as compared with 474,802 tons in the corresponding period of 1881, and 406,012 tons in the corresponding period of 1880. In these totals Spanish minerals figured for 179,541 tons, 156,862 tons, and 96,824 tons respectively, while Algeria minerals figured for 136,749 tons, 120,095 tons, and 124,449 tons respectively. There is little change in the general condition of the German iron trade, which remains favourable. Pig has been in good demand upon the German markets, and iron has been freely dealt in. Plates have been in request, especially those intended for construction purposes. The demand has, indeed, been well sustained for all products of German metallurgical industry, and there is, accordingly, some expectation of an advance in prices. Contracts for 14,400 tons of steel rails have just been shared between Herr Krupp and the Dortmund Union Works; Krupp took two lots at 77. 17s. 4d. per ton, and the Dortmund Union agreed to supply the other two lots at 77. 18s. per ton. The German coal trade continues to present a good tone; the demand has been well sustained, especially coal for metallurgical purposes. Coke has also maintained former rates with firmness.

Firmness is still the prevailing characteristic of the Belgian iron trade, and transactions appear to be becoming more numerous every day. The various descriptions of iron are all in sufficient request to enable producers to maintain their rates with the greatest firmness. No advance has yet been established, but symptoms of a rise are beginning to be remarked. Pig is tending upwards. English pig has been firm upon the Belgian markets, but has not changed in price. As regards Belgian pig ordinary qualities have made 27. 4s. 6d. per ton. The Athus Works have disposed of almost all their production for three months in advance. As regards Luxembourg pig, it is too high to obtain a footing in Belgium. Iron has been held with firmness in Belgium at a minimum of 57. 4s. per ton. Some contracts have been concluded at 57. per ton, and 57. 8s. per ton has also been asked. Girders have been dealt in freely at 57. 12s. to 57. 16s. per ton. Plates, which have been rather neglected, have acquired rather more activity; the minimum quotation is now 77. 4s. per ton. Boiler-plates have made 87. per ton. The John Cockerill works are very active; their consumption of coal is now 1280 tons per day, although all their new blast furnaces are not yet at work.

The Belgian coal trade continues to be well maintained. The demand is acquiring, if anything, additional strength, and if all descriptions of coal are not equally in request it may be said that all qualities are, nevertheless, disposed of with considerable facility. Deliveries are generally actively maintained, and the Liège basin has rarely been so bare of coal as it is at present. In the Charleroi basin energetic exertions have to be made to keep pace with the demand, while in the Couchant de Mons there is no appearance of a reconstitution of stocks. The report of M. Von Scherpenzeel-Thim upon the mineral industry of the province of Liège in 1881 has just appeared. It contains a great mass of complete and interesting information. The coal extraction of the province amounted to 3,900,000 tons, against 3,824,000 tons in 1880, showing an increase of 76,000 tons last year. The production of coke in the province last year was 527,000 tons, as compared with 609,000 tons in 1880. The exportation of coal from the province increased from 708,000 tons in 1880 to 795,000 tons in 1881, showing an augmentation of 88,000 tons, or more than 10 per cent. last year. The chief progress occurred in the deliveries to Germany and the Luxembourg, which presented an advance of 61,000 tons last year, as compared with 1880. The deliveries to France were also 38,000 tons larger last year than in 1880. The number of persons engaged in coal mining in the province who were killed last year in the course of their working operations was 112.

COATING METAL SURFACES WITH OTHER METAL OR ALLOY.

The coating or plating of iron or steel with metals or alloys which are tensile at red heat, without the use of a flux for uniting the two metals, has the disadvantageous consequence that by reason of the oxidation of iron and steel (which it is extremely difficult to avoid when these metals are heated) there are many parts or places at which the iron or the steel is either not connected at all, or but very insufficiently connected, with the superimposed metal or alloy, this defect causing considerable waste in the working of the coated metal. By means of his present invention Mr. HERMANN REUSCH, of Dillingen on the Saar, Germany, obviates this difficulty. After having cleaned the iron or steel plate, or other article to be coated from the oxides, or other impurities adhering thereto, he covers or coats the same with a thin film of tin, or with an easily fusible alloy of tin, and then he places the plate or other article in the metal with which it is to be coated or plated, and the plate being thus prepared it is heated to a red heat in a reducing flame, and is rolled out between smooth well-cooled rollers until it is reduced to the required thickness.

When it is desired to combine metals or alloys which are tensile at a red heat, for instance, when coating copper and silver and the like he proceeds in a similar manner. The coating or plating is facilitated if the iron or steel surface, after having been cleaned, is lightly covered by brushing or dusting over the same chloride of zinc, ammoniac, or other metal chloride which volatilises at a red heat, and which is for this purpose either dissolved in water or pulverised; the iron or steel to be coated is then covered with tin-foil and placed in the metal or alloy to be superimposed upon the said iron or steel, and the heating and rolling out are afterwards proceeded with.

ELECTRIC BATTERIES.

The invention of Mr. GEORGE FOURNIER, of Paris, consists essentially in the employment of metallic oxides capable of forming, with glycerine or glyceric acid, a solid compound insoluble in water, and the use of this compound for the manufacture of primary and secondary batteries. Of all the metallic oxides oxide of lead is the best adapted for the purposes of the invention. He takes oxide of lead in powder and mixes it with glycerine in sufficient quantity to form a thick paste sufficiently fluid to be run into moulds of suitable form. In about 24 hours after being thus cast the mass becomes solid and insoluble in water. This compound is very readily reducible, so much so, that by placing it in a bath of dilute sulphuric acid in connection by a conducting wire with metallic zinc it becomes reduced as fast as it is attached by the zinc to metallic lead. It is, therefore, eminently suited for the manufacture of galvanic batteries, in which it would form the depolarising electrode, whether employed wholly in lieu of carbon, or whether applied in layers upon carbon or other conductor of electricity.

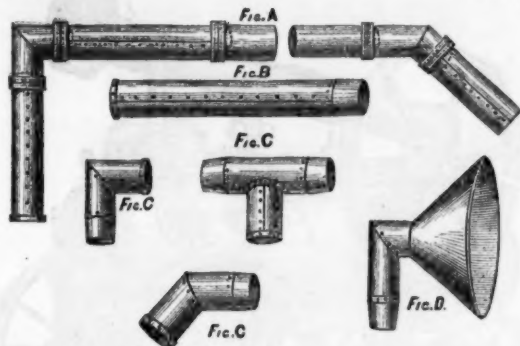
The compound is an excellent depolarising agent, which permits of forming constant single fluid batteries. As above mentioned the compound after having served as the depolarising electrode becomes completely reduced. Thus in the example we have metallic lead as the product of this reduction, which being in a complete state of division is eminently adapted to recombine with oxygen in order to serve again as a depolarising agent, or even to become peroxidised, and may therefore be employed with advantage in the manufacture of secondary batteries. He can prepare secondary batteries directly by the peroxidisation of plates prepared with oxide of lead and glycerine as above described without previous reduction to the metallic state.

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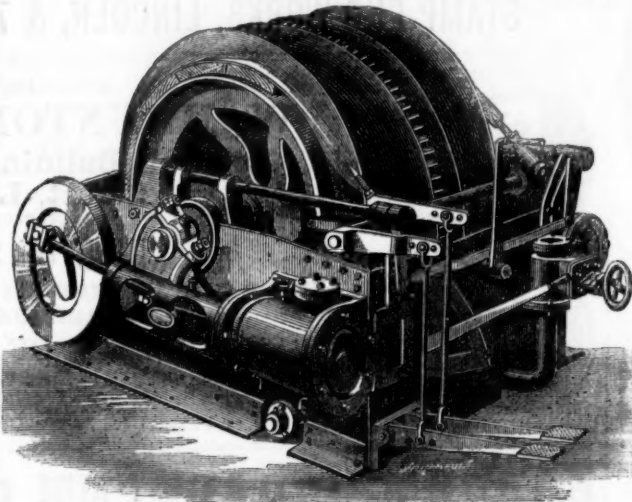
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Fig. A.—Shows the tubes adapted for any variation in direction.
Fig. B.—Straight length of tube.
Fig. C.—Different angle bends.
Fig. D.—Is a hopper to receive air at top of shaft.

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C.—10 in. " " 3 ft. 6 in. drums.
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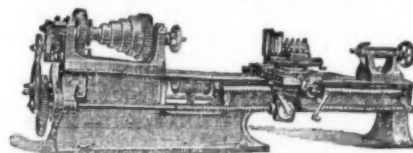
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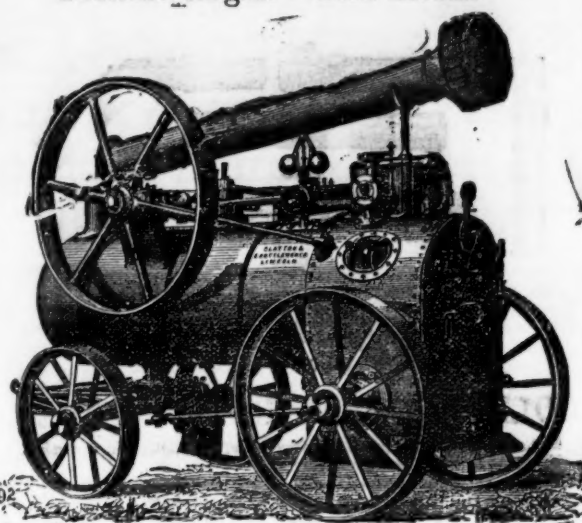
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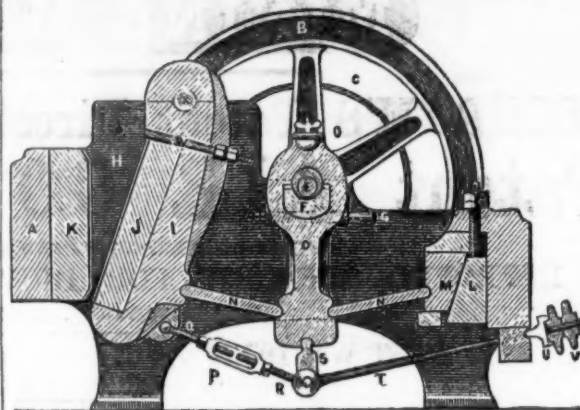
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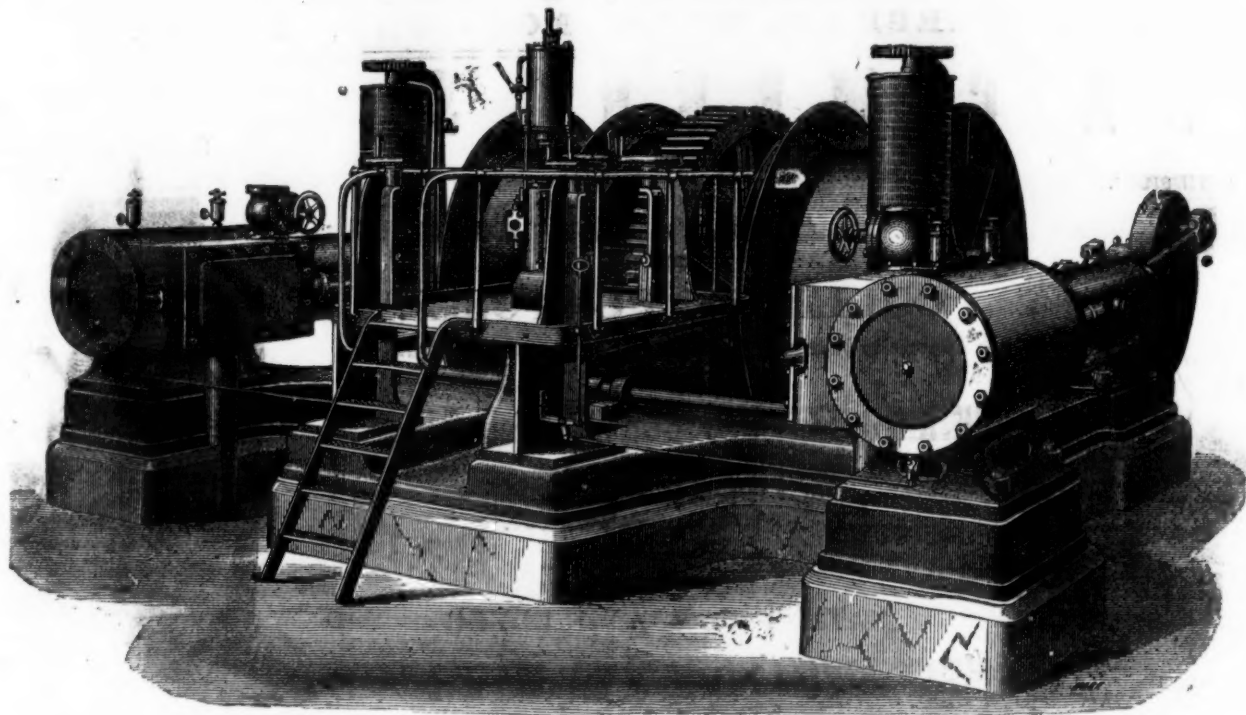
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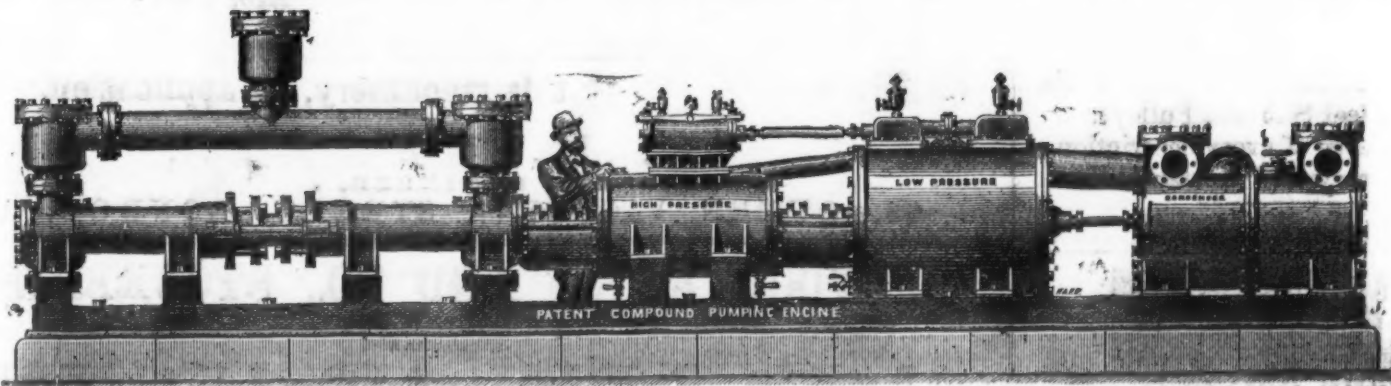
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MAKER OF THE

H. R. MARSDEN, NEW PATENT FINE CRUSHER OR PULVERIZER,

FOR REDUCING TO AN IMPALPABLE POWDER, OR ANY DEGREE OF FINENESS REQUIRED,

GOLD QUARTZ, SILVER, COPPER, TIN, ZINC, LEAD,
AND ORES OF EVERY DESCRIPTION;

Also Cement, Barytes, Limestone, Chalk, Pyrites, Coprolite, &c., &c. These Machines are in successful operation in this country and abroad, and reference to users can be had on application.

PATENT REVERSIBLE CUBING and CRUSHING
JAWS, IN FOUR SECTIONS,
WITH PATENT FACED BACKS, REQUIRING
NO WHITE METAL IN FIXING.

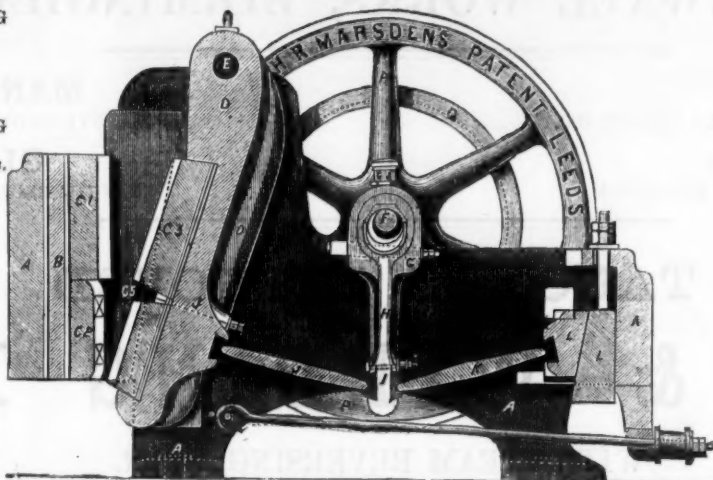
NEW PATENT CRUCIBLE CAST-STEEL CONNECTING
RODS.
NEW PATENT RENEWABLE TOGGLE CUSHIONS, &c.

OVER 4000 IN USE.

EXTRACT FROM TESTIMONIALS.
PULVERISER.

"I have great pleasure in bearing testimony to the merits and capabilities of your patent combined fine crusher and sieving apparatus. I have tried it on a variety of ores and minerals, and it pulverizes them with equal success. You can put in a small paving stone, and bring it out like flour."

"The power required to drive it is very small, being from 4 to 8-horse, and the repairs are almost nil."
"I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam, and our engine, which is a 12-h.p., plays with the work, in fact we use the Stonebreaker and the Pulveriser both together with 85 lbs."



FOR CATALOGUES, TESTIMONIALS, &c., APPLY TO THE SOLE MAKER,

H. R. MARSDEN, SOHO FOUNDRY, LEEDS.

AWARDED OVER

60

FIRST-CLASS GOLD AND SILVER MEDALS.

ADOPTED BY THE PRINCIPAL CORPORATIONS, CONTRACTORS, MINING COMPANIES, &c., IN ALL PARTS OF THE WORLD.

ROAD METAL BROKEN EQUAL TO HAND, AT ONE-TENTH THE COST.

EXTRACTS FROM TESTIMONIALS.
STONEBREAKER.

"The 15 x 8 stonebreaker gives perfect satisfaction. It produces a more cubical stone than any others I have seen at work."

"Your 15 x 10 machine makes the best road metal I have ever seen put through a machine—in fact, comparing favourably with hand broken."

"Your 10 x 7 crusher at the Aruba Gold Mines will crush 90 to 100 tons per 24 hours of the hardest gold quartz to 1" size."

"Some of your testimonials do not give your machines half their due. I have seen men hammering away on a big rock for a quarter of a day which your machine would reduce to the required size in a quarter of a minute. I would guarantee that your largest size machine would reduce more of the Cornish tin capels (which is the hardest rock of England) in a day than 200 men, and at 1-25th the cost."

GREATLY REDUCED PRICES ON APPLICATION.

JOHN CAMERON'S

FLY-WHEELS ON BOTH SIDES.

SPECIALITIES ARE HIS

STEAM PUMPS

FOR

COLLIERY PURPOSES.

Specially adapted for forcing Water any height

ALSO, FOR

SINKING, FEEDING BOILERS AND STEAM
FIRE ENGINES,

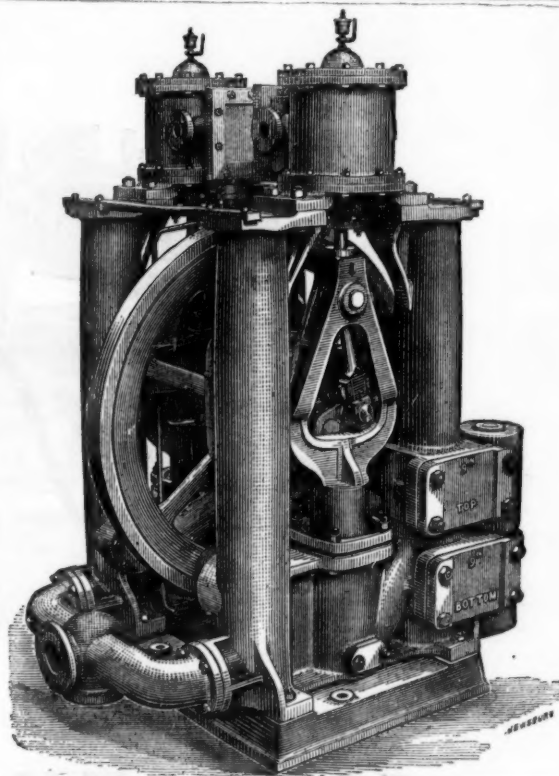
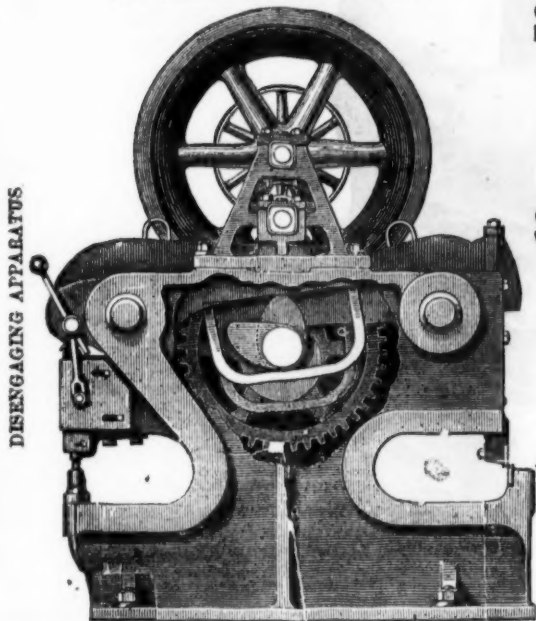
which he has made over 8000.

ALSO, HIS

PATENT CAM AND LEVER

PUNCHING and SHEARING MACHINES.

Works: Oldfield Road, Salford,
Manchester.



"KING AND HUMBLE'S" PATENT DETACHING HOOK

To prevent over winding

PATENT SAFETY CAGE,

suspend in Shaft in cases of fracture of Winding Rope

Winding and Hauling Engines,

Special Centrifugal Pumps,

Weighing Machines,

Steel Castings, Mining Steel and Tools,

Winches, Steel Shovels, Pulleys,

Mining Machinery of every description.

Brick Machinery and Mortar Mills.

Stephen Humble, Engineer, Derby.



HULME & LUND'S SPECIALITIES:
DONKEY PUMPS, MINING PUMPS,
HORIZONTAL PUMPS, TAR PUMPS,
AIR COMPRESSORS,
FIRE ENGINES, STEAM ENGINES,
WILBURN IRON WORKS
SALFORD, MANCHESTER.

ENGLISH CAPITALIST wishing a CORRECT REPORT on the
SILVER MINES of COLORADO will do well to apply to—
Capt. DANIEL ROBERTS, Georgetown, Colorado.

THE "CHAMPION" ROCK BORER

MINR AND QUARRY STANDS, STEEL DRILLS, SPECIALLY PREPARED INDIARUBBER HOSE, TESTED
IRON PIPES, &c.



Air-Compressing Machinery,

Simple, strong, and giving most excellent results.

Full particulars of rapid and economical work effected
by this machinery, on application.

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ENGINEER,

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J. WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION),

Manufacturers of

CRANE, INCLINE, AND PIT CHAINS,

Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADES,
FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS,
RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c.

Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions

WELDED STEEL CHAINS

FOR CRANES, INCLINES, MINES, &c.,
MADE ALL SIZES.